

A PROJECT
On
STUDENT DATABASE ANALYSIS USING
PYTHON

BACHELOR OF TECHNOLOGY

By

DEPARTMENT OF DATA SCIENCE

AVALA HARIKA

22KP5A4401

Under the esteemed Guidance of

Er. S AKSHAY KUMAR

CS CODENZ



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GUDIVADA – 521 323, ANDHRA PRADESH., INDIA

2022-2023

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CERTIFICATE

This is to certify that dissertation entitled “**STUDENT DATABASE ANALYSIS USING PYTHON**” submitted by **AVALA HARIKA (22KP5A4401)** in the partial fulfillment of the requirements for the award of the degree of **BACHELOR OF TECHNOLOGY** from **CS CODENZ** is a record of Bonafide work carried out by them under my guidance and supervision during the year 2022-2023.

Signature of the Supervisor

Er.S Akshay Kumar

CS CODENZ

Signature of the HOD

Mr.D. Koteswar Rao, M.Tech

Associative professor & HOD

Data science NRIIT

DECLARATION

I **AVALA HARIKA (22KP5A4401)** declared that the dissertation report entitled “**STUDENT DATABASE ANALYSIS USING PYTHON**” is no more than 1,00,000 words in length including quotes and exclusive of tables, figures, bibliography, and references.

Roll No

Name

Signature

22KP5A4401

AVALA HARIKA

Date:

Place:

ACKNOWLEDGEMENT

This report dissertation could not have been written without the support of our guide **Er. S AKSHAY KUMAR CS CODENZ** who not only served as our superior but also encouraged and challenged us throughout our academic program our foremost thanks goes to his. Without his this dissertation would not have been possible. We appreciate him vast knowledge in many areas, and his insights, suggestions and guidance that helped to shape our research skills

It is needed with a great sense of pleasure and immense sense of gratitude that we acknowledge the help of these individuals. We owe many thanks to many people who helped and supported us during the writing of this report. We are thankful to our project coordinator **Er. S AKSHAY KUMAR CS CODENZ**, for his continuous support

We express our sincere thanks to our respected for bet valuable suggestion and constant motivation that greatly helped us in successful completion of project We also take the privilege to express our heartfelt gratitude to **Er. S AKSHAY KUMAR CS CODENZ**

We are thankful to all faculty members for extending their kind cooperation and assistance Finally,we are extremely thankful to our parents and friends for their constant helped moral support

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ABSTRACT

The Primary objective of this “ **STUDENT DATABASE ANALYSIS USING PYTHON**” is to fulfill requirements of large data sets into understandable by using some techniques. It includes data of historical warranty claims and real-time monitoring capabilities. The project also focuses on achieving a high level of accuracy in large data sets.

REQUIREMENTS

HARDWARE REQUIREMENTS

- Personal Computer / Laptop with minimum RAM (8 GB), ROM (256 GB) and Processor(i5)
- Good latency internet access

SOFTWARE REQUIREMENTS

- Basic Search Engine (Google)
- Google Collaboratory
- MICROSOFT WORD
- JUPYTER NOTEBOOK

FUNCTIONAL REQUIREMENTS

- Calculation
- Help in manipulating data and easy process.
- Graphical representation of Datasets
- Importing pandas, numpy, matplotlib,

DESCRIPTION

Data Analytics is a process of scrutinizing the data to obtain accurate results. In data analytics the main purpose is extracting the original data from data. In this data analytics we need to perform the major that is data munging.

STEPS OF DATA ANALYSIS

1. Data Pre processing
2. Dropping a particular row and column
3. Using Describe function
4. Finding null values and sum of null values
5. Shape of data
6. Columns of the data
7. Renaming of columns
8. Filtering data for CGPA
9. Replacing the inconsistency values
10. Finding CGPA which is greater than 8.0
11. Finding CGPA in descending order
12. Group by function
13. Changing the age which is in float in int
14. Using Matplotlib plotting a graph

CODE

1) Import the data:

The first step in this is to collect data from students. We collect the data from our class students and merged that data into a huge amount of data.

2) COLLECTING THE DATA

Pandas - Helps to create a data set and it is also a library in python.

Pandas Package -It's a group of Panel Data's which are used to analyze the labelled data and relational data.

Series -A series is a method of pandas and labelled data. Series are nothing but columns in Excelsheet.

Importing data-

```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
#reading data from excel fil
df=pd.read_excel('dsdbx.xlsx')
```

OUTPUT:

| | Timestamp | Email address \ |
|----|-------------------------|------------------------------------|
| 0 | 2023-06-13 14:24:58.772 | vennachandana1@gmail.com |
| 1 | 2023-06-13 14:25:15.609 | adilakshmi4765@gmail.com |
| 2 | 2023-06-13 14:25:50.957 | sravankumar7156@gmail.com |
| 3 | 2023-06-13 14:26:01.824 | sandeepyeruva1124@gmail.com |
| 4 | 2023-06-13 14:26:13.848 | sivajibejjanki@gmail.com |
| 5 | 2023-06-13 14:26:23.424 | ramyayalabolu123r@gmail.com |
| 6 | 2023-06-13 14:27:05.330 | charithareddy3914@gmail.com |
| 7 | 2023-06-13 14:27:16.973 | gayathripolepalli70@gmail.com |
| 8 | 2023-06-13 14:27:41.072 | syedtasleem07@gmail.com |
| 9 | 2023-06-13 14:28:10.012 | sowjanyaathota11@gmail.com |
| 10 | 2023-06-13 14:28:10.559 | tammasahithi1@gmail.com |
| 11 | 2023-06-13 14:28:34.026 | podilisarayu6@gmail.com |
| 12 | 2023-06-13 14:28:43.092 | shaikkarishma811@gmail.com |
| 13 | 2023-06-13 14:28:57.412 | kumarvalaparla890@gmail.com |
| 14 | 2023-06-13 14:30:05.091 | patchachinnu3@gmail.com |
| 15 | 2023-06-13 14:30:05.577 | manu952041@gmail.com |
| 16 | 2023-06-13 14:30:07.913 | vanukuri.raghava@gmail.com |
| 17 | 2023-06-13 14:30:57.744 | shaiksakina05@gmail.com |
| 18 | 2023-06-13 14:33:16.842 | us465249@gmail.com |
| 19 | 2023-06-13 14:36:46.844 | vallu.srinu756939@gmail.com |
| 20 | 2023-06-13 14:34:05.142 | undelachandraobulareddy@gmail.com |
| 21 | 2023-06-13 14:32:17.269 | farukh.786syed@gmail.com |
| 22 | 2023-06-13 14:33:08.038 | anushayalabolu12@gmail.com |
| 23 | 2023-06-13 14:33:16.147 | madhulathasure9@gmail.com |
| 24 | 2023-06-13 14:34:00.504 | thammisettsrikanthraj9@gmail.com |
| 25 | 2023-06-13 14:34:24.599 | shiakmobin2002@gmail.com |
| 26 | 2023-06-13 14:34:24.985 | abdulkhadar6842@gmail.com |
| 27 | 2023-06-13 14:34:31.602 | ravuakshaya@gmail.com |
| 28 | 2023-06-13 14:34:41.989 | hemasanjushasanikommu828@gmail.com |
| 29 | 2023-06-13 14:34:52.277 | ynagasasikumar@gmail.com |
| 30 | 2023-06-13 14:35:26.194 | rahamtunnisashaik09@gmail.com |

| | MOTHER NAME | COURSE | CGPA | AGE \ |
|---|--------------------|--------|------|-------|
| 0 | Venna Lakshmidevi | DS | 8 | 19 |
| 1 | N.Sri Lakshmi | CSE | 83 | 19 |
| 2 | Venkateswaramma | MECH | 7 | 20 |
| 3 | Yeruva Anjali Devi | CSE | 9.5 | 20 |

| | | | | |
|----|-------------------|------|------|----|
| 4 | B.veramma | DS | 0.72 | 23 |
| 5 | Y Lakshmi Rajyam | DS | 80 | 19 |
| 6 | P.Kavitha | DS | 70 | 19 |
| 7 | POLEPALLI.SRIDEVI | DS | 10 | 19 |
| 8 | Syed Naseema | MECH | 8 | 19 |
| 9 | T.ARUNA KUMARI | DS | 8 | 19 |
| 10 | Tamma Padmavathi | DS | 7.7 | 19 |

EMAIL \

| | |
|----|-----------------------------------|
| 0 | vennachandana1@gmail.com |
| 1 | adilakshmi4765@gmail.com |
| 2 | sravankumar7156@gmail.com |
| 3 | sandeepyeruval124@gmail.com |
| 4 | sivajibejjanki@gmail.com |
| 5 | ramyayalabolu123r@gmail.com |
| 6 | charithareddy3914@gmail.com |
| 7 | gayathriplepalli70@gmail.com |
| 8 | syedtasleem07@gmail.com |
| 9 | sowjanyaatha11@gmail.com |
| 10 | tammasahithi1@gmail.com |
| 11 | Podilisarayu6@gmail.com |
| 12 | shaikkarishma811@gmail.com |
| 13 | Kumarvalaparla890@gmail.com |
| 14 | Patchachinnu@gmail.com |
| 15 | manu952041@gmail.com |
| 16 | vanukuri.raghava@gmail.com |
| 17 | Shaiksakina05@gmail.com |
| 18 | us465249@gmail.com |
| 19 | vallu.srinu756939@gmail.com |
| 20 | undelachandraobulareddy@gmail.com |

```
#data preprocessing
print(df.info())
print(df.dropna())
print(df.isnull())
(df.fillna(method='bfill'))
(df.fillna(method='ffill'))
```

OUTPUT:

```
<class 'pandas.core.frame.DataFrame'>
RangeIndex: 52 entries, 0 to 51
Data columns (total 13 columns):
#   Column          Non-Null Count  Dtype
---  -
```

| | | | |
|----|------------------|-------------|----------------|
| 0 | Timestamp | 52 non-null | datetime64[ns] |
| 1 | Email address | 52 non-null | object |
| 2 | STUDENT NAME | 52 non-null | object |
| 3 | ROLL NUMBER | 52 non-null | object |
| 4 | FATHER NAME | 52 non-null | object |
| 5 | MOTHER NAME | 52 non-null | object |
| 6 | COURSE | 52 non-null | object |
| 7 | CGPA | 52 non-null | object |
| 8 | AGE | 52 non-null | object |
| 9 | EMAIL | 52 non-null | object |
| 10 | BRANCH | 48 non-null | object |
| 11 | CURRENT SEMISTER | 52 non-null | object |
| 12 | AADHAAR NO | 52 non-null | object |

dtypes: datetime64[ns](1), object(12)
memory usage: 5.4+ KB
None

| | Timestamp | Email address \ |
|----|-------------------------|-------------------------------|
| 0 | 2023-06-13 14:24:58.772 | vennachandana1@gmail.com |
| 1 | 2023-06-13 14:25:15.609 | adilakshmi4765@gmail.com |
| 2 | 2023-06-13 14:25:50.957 | sravankumar7156@gmail.com |
| 3 | 2023-06-13 14:26:01.824 | sandeepyeruva1124@gmail.com |
| 4 | 2023-06-13 14:26:13.848 | sivajibejjanki@gmail.com |
| 5 | 2023-06-13 14:26:23.424 | ramyayalabolu123r@gmail.com |
| 6 | 2023-06-13 14:27:05.330 | charithareddy3914@gmail.com |
| 7 | 2023-06-13 14:27:16.973 | gayathripolepalli70@gmail.com |
| 8 | 2023-06-13 14:27:41.072 | syedtasleem07@gmail.com |
| 9 | 2023-06-13 14:28:10.012 | sowjanyathota11@gmail.com |
| 10 | 2023-06-13 14:28:10.559 | tammasahithi1@gmail.com |

| | Tim esta mp | Email address | STU DEN T NAM E | ROL L NU MBE R | FATH ER NAM E | MOTHE R NAME | CO UR SE | C G P A | A G E | EMAIL | BR AN CH | CU RR ENT SE MIS TER | AAD HAA R NO |
|---|-------------------------|--------------------------|-----------------------------|----------------------------|------------------------|--------------------|----------------|------------------|-------------|--------------------------|----------------|-------------------------------------|-----------------------|
| 0 | 2023-06-13 14:24:58.772 | vennachandana1@gmail.com | Venna Chandra | 21KP1A44C5 | Venna Ramanareddy | Venna Lakshmi devi | DS | 8 | 19 | vennachandana1@gmail.com | Data science | 2-2 | 636336922883 |
| 1 | 2023-06-13 14:25:15.609 | adilakshmi4765@gmail.com | N.Venkatesh | 21KP1A4468 | N.Manikya Rao | N.Sri Lakshmi | CS E | 83 | 19 | adilakshmi4765@gmail.com | CS E-DS | II-II | 602515258256 |

| | Tim esta mp | Email address | STU DEN T NAM E | ROL L NU MBE R | FATH ER NAM E | MOTHE R NAME | CO UR SE | C G P A | A G E | EMAIL | BR AN CH | CU RR ENT SE MIS TER | AAD HAA R NO |
|---|-------------------------|-------------------------------|-----------------------------|----------------------------|----------------------------|--------------------|----------------|------------------|-------------|-------------------------------|------------------|-------------------------------------|-----------------------|
| | 609 | | | | | | | | | | | | |
| 2 | 2023-06-13 14:25:50.957 | sravankumar7156@gmail.com | Sravan Kumar | 21KP1A4488 | Rama Chandra Rao | Venkateswaramma | Mech | 7 | 20 | sravankumar7156@gmail.com | mech | 4 | 930319053088 |
| 3 | 2023-06-13 14:26:01.824 | sandeepyeruva1124@gmail.com | Yeruva sandeep reddy | 21KP1A44D1 | Yeruva Ajay Kumar reddy | Yeruva Anjali Devi | CS E | 9.5 | 20 | sandeepyeruva1124@gmail.com | CS E | 2-3 | 576154990146 |
| 4 | 2023-06-13 14:26:13.848 | sivajibejjanki@gmail.com | B.sivaji | 22kp5a4402 | B.lakshmaiah | B.veramma | DS | 0.72 | 23 | sivajibejjanki@gmail.com | Computer science | 2-2 | 895444662410 |
| 5 | 2023-06-13 14:26:23.424 | ramyayalabolu123r@gmail.com | Y.Ramya | 21KP1A44C8 | Y.Anjiah | Y Lakshmi Rajyam | DS | 80 | 19 | ramyayalabolu123r@gmail.com | CS D | 2-2 | 724574588425 |
| 6 | 2023-06-13 14:27:05.330 | charithareddy3914@gmail.com | P.charitha reddy | 21KP1A4475 | P.Madhava Reddy | P.Kavitha | DS | 70 | 19 | charithareddy3914@gmail.com | CS D | 2.2 | 810177524502 |
| 7 | 2023-06-13 14:27:16.973 | gayathripolepalli70@gmail.com | POLEPALLI. GAYATHRI | 21KP1A4481 | POLEPALLI. GURUBRAHMA CHAR | POLEPALLI.SRI DEVI | DS | 10 | 19 | gayathripolepalli70@gmail.com | Data Science | 2-2 | 721819168061 |

| Time stamp | Email address | STUDENT NAME | ROLL NUMBER | FATHER NAME | MOTHER NAME | COURSE | C G P A | AGE | EMAIL | BRANCH | CURRENT SEMESTER | AADHAR NO | |
|------------|-------------------------------|---------------------------|--------------------|-------------|---------------------|-------------------------|---------|-----|-------|---------------------------|--------------------|-----------|--------------|
| I | | | | | | | | | | | | | |
| 8 | 2023-06-13 14:27:41.072 | syedtasleem07@gmail.com | Syed Tasleem Afroz | 21KP1A44A9 | Syed Rahiman | Syed Naseema | M E C H | 8 | 19 | syedtasleem07@gmail.com | DS | 2-2 | 617020354793 |
| 9 | 2023-06-13 14:28:10.012 | sowjanyathotall@gmail.com | T.SO WJANYA | 21KP1A44B6 | T.SA MBA SIVA RAO | T.ARUNA KUMARI | DS | 8 | 19 | sowjanyathotall@gmail.com | DATA SCIENCE | 2-2 | 338666948901 |
| 10 | 2023-06-13 14:28:10.559 | tammasahithil@gmail.com | Tamma Sahithi | 21KP1A44B0 | Tamma krishna reddy | Tamma Padmavathi | DS | 7.7 | 19 | tammasahithil@gmail.com | CSE (Data science) | 2-2 | 685349832128 |
| 0 | Email address | | | | | STUDENT NAME \ | | | | | | | |
| 1 | vennachandana1@gmail.com | | | | | Venna Chandana | | | | | | | |
| 2 | adilakshmi4765@gmail.com | | | | | N.Venkatesh | | | | | | | |
| 3 | sravankumar7156@gmail.com | | | | | Sravan Kumar | | | | | | | |
| 4 | sandeepyeruval124@gmail.com | | | | | Yeruva sandeep reddy | | | | | | | |
| 5 | sivajibejjanki@gmail.com | | | | | B.sivaji | | | | | | | |
| 6 | ramyayalabolu123r@gmail.com | | | | | Y.Ramya | | | | | | | |
| 7 | charithareddy3914@gmail.com | | | | | P.charitha reddy | | | | | | | |
| 8 | gayathripolepalli70@gmail.com | | | | | POLEPALLI. GAYATHRI | | | | | | | |
| 9 | syedtasleem07@gmail.com | | | | | Syed Tasleem Afroze | | | | | | | |
| 10 | sowjanyathotall@gmail.com | | | | | T.SOWJANYA | | | | | | | |
| 11 | tammasahithil@gmail.com | | | | | Tamma Sahithi | | | | | | | |
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| 13 | shaikkarishma811@gmail.com | | | | | shaik karishma | | | | | | | |
| 14 | kumarvalaparla890@gmail.com | | | | | Venkata Aravind Kumar.V | | | | | | | |
| 15 | patchachinnu3@gmail.com | | | | | Patcha Jaswanth | | | | | | | |
| 16 | manu952041@gmail.com | | | | | Pachipulusu Manohar | | | | | | | |
| 17 | vanukuri.raghava@gmail.com | | | | | Raghava | | | | | | | |
| 18 | shaiksakina05@gmail.com | | | | | Shaik sameer | | | | | | | |

18 us465249@gmail.com S sk usman
 19 vallu.srinu756939@gmail.com Vallu Srinu Siva Subrahmanyam
 20 undelachandraobulareddy@gmail.com Undela Chandra Obula Reddy

In [6]:

```
#by using describe function
df1=df["CGPA"].describe()
print(df1)
```

OUTPUT:

```
count    52
unique    27
top       80
freq       7
Name: CGPA, dtype: int64
```

In [7]:

```
#finding null values and sum of null va.
df.isnull()
```

OUTPUT:

Out[7]:

| | Email address | STUDE NT NAME | ROLL NUMB ER | FATH ER NAME | MOTH ER NAME | COUR SE | CGP A | AG E | BRAN CH | CURRE NT SEMIST ER | AADHA AR NO |
|---|------------------|---------------------|--------------------|--------------------|--------------------|------------|----------|---------|------------|-----------------------------|----------------|
| 0 | False | False | False | False | False | False | False | False | False | False | False |
| 1 | False | False | False | False | False | False | False | False | False | False | False |
| 2 | False | False | False | False | False | False | False | False | False | False | False |
| 3 | False | False | False | False | False | False | False | False | False | False | False |
| 4 | False | False | False | False | False | False | False | False | False | False | False |

| | Email addre ss | STUDE NT NAME | ROLL NUMB ER | FATH ER NAME | MOTH ER NAME | COUR SE | CGP A | AG E | BRAN CH | CURRE NT SEMIST ER | AADHA AR NO |
|--------|----------------------|---------------------|--------------------|--------------------|--------------------|------------|----------|-----------|------------|-----------------------------|----------------|
| | | | | | | | | e | | | |
| 5 | False | False | False | False | False | False | False | Fals e | False | False | False |
| 6 | False | False | False | False | False | False | False | Fals e | False | False | False |
| 7 | False | False | False | False | False | False | False | Fals e | False | False | False |
| 8 | False | False | False | False | False | False | False | Fals e | False | False | False |
| 9 | False | False | False | False | False | False | False | Fals e | False | False | False |
| 1 0 | False | False | False | False | False | False | False | Fals e | False | False | False |
| 1 1 | False | False | False | False | False | False | False | Fals e | False | False | False |
| 1 2 | False | False | False | False | False | False | False | Fals e | False | False | False |
| 1 3 | False | False | False | False | False | False | False | Fals e | False | False | False |
| 1 4 | False | False | False | False | False | False | False | Fals e | False | False | False |
| 1 5 | False | False | False | False | False | False | False | Fals e | True | False | False |
| 1 6 | False | False | False | False | False | False | False | Fals e | False | False | False |
| 1 7 | False | False | False | False | False | False | False | Fals e | False | False | False |
| 1 8 | False | False | False | False | False | False | False | Fals e | False | False | False |
| 1 9 | False | False | False | False | False | False | False | Fals e | False | False | False |
| 2 | False | False | False | False | False | False | False | Fals | False | False | False |

| Email address | STUDENT NAME | ROLL NUMBER | FATHER NAME | MOTHER NAME | COURSE | CGPA | AGE | BRANCH | CURRENT SEMISTER | AADHAR NO |
|------------------|-----------------|----------------|----------------|----------------|--------|------|-----|--------|---------------------|--------------|
| 0 | | | | | | | e | | | |

```
#finding null values
and sum of null
values
```

OUTPUT:

| Email address | STUDENT NAME | ROLL NUMBER | FATHER NAME | MOTHER NAME | COURSE | CGPA | AGE | BRANCH | CURRENT SEMESTER | AADHAR NO | |
|------------------|-----------------|----------------|----------------|----------------|--------|-------|-------|--------|---------------------|--------------|-------|
| 0 | False | False | False | False | False | False | False | False | False | False | False |
| 1 | False | False | False | False | False | False | False | False | False | False | False |
| 2 | False | False | False | False | False | False | False | False | False | False | False |
| 3 | False | False | False | False | False | False | False | False | False | False | False |
| 4 | False | False | False | False | False | False | False | False | False | False | False |
| 5 | False | False | False | False | False | False | False | False | False | False | False |
| 6 | False | False | False | False | False | False | False | False | False | False | False |
| 7 | False | False | False | False | False | False | False | False | False | False | False |
| 8 | False | False | False | False | False | False | False | False | False | False | False |
| 9 | False | False | False | False | False | False | False | False | False | False | False |
| 10 | False | False | False | False | False | False | False | False | False | False | False |
| 11 | False | False | False | False | False | False | False | False | False | False | False |

| Email address | STUDENT NAME | ROLL NUMBER | FATHER NAME | MOTHER NAME | COURSE | CGPA | AGE | BRANCH | CURRENT SEMESTER | AADHAR NO | |
|---------------|--------------|-------------|-------------|-------------|--------|-------|-------|--------|------------------|-----------|-------|
| 12 | False | False | False | False | False | False | False | False | False | False | False |
| 13 | False | False | False | False | False | False | False | False | False | False | False |
| 14 | False | False | False | False | False | False | False | False | False | False | False |
| 15 | False | False | False | False | False | False | False | False | True | False | False |
| 16 | False | False | False | False | False | False | False | False | False | False | False |
| 17 | False | False | False | False | False | False | False | False | False | False | False |
| 18 | False | False | False | False | False | False | False | False | False | False | False |
| 19 | False | False | False | False | False | False | False | False | False | False | False |
| 20 | False | False | False | False | False | False | False | False | False | False | False |

-

```
#filling null values using ffill
df.ffmpeg(axis=1,inplace=True)
df.isnull().sum()
```

OUTPUT:

Email address 0

```
STUDENT NAME      0
ROLL NUMBER       0
FATHER NAME       0
MOTHER NAME       0
COURSE            0
CGPA              0
AGE              0
BRANCH            0
CURRENT SEMISTER  0
AADHAAR NO       0
dtype: int64
```

```
#shaping the data frame by using shape()
print("shape of the data frame:")
print(df.shape)
```

OUTPUT:

```
shape of the data frame:
(52, 11)
```

```
df.columns
```

OUTPUT:

```
Index(['Email address', 'STUDENT NAME', 'ROLL NUMBER', 'FATHER NAME',
      'MOTHER NAME', 'COURSE', 'CGPA', 'AGE', 'BRANCH', 'CURRENT SEMISTER',
      'AADHAAR NO'],
      dtype='object')
```

```
#renaming the column names
df.rename(columns={'Email address':'Gmail','CURRENT
SEMISTER':'SEMISTER','AADHAR NO':'UIDAI NO'},inplace=True)
print(df.columns)
```

OUTPUT:

```
Index(['Gmail', 'STUDENT NAME', 'ROLL NUMBER', 'FATHER NAME', 'MOTHER NAME',
      'COURSE', 'CGPA', 'AGE', 'BRANCH', 'SEMISTER', 'AADHAAR NO'],
      dtype='object')
```

Print(df)

OUTPUT:

| | Gmail | STUDENT NAME \ | |
|----|-----------------------------------|-------------------------------|---------------------|
| 0 | vennachandana1@gmail.com | Venna Chandana | |
| 1 | adilakshmi4765@gmail.com | N.Venkatesh | |
| 2 | sravankumar7156@gmail.com | Sravan Kumar | |
| 3 | sandeepyeruval124@gmail.com | Yeruva sandeep reddy | |
| 4 | sivajibejjanki@gmail.com | B.sivaji | |
| 5 | ramyayalabolu123r@gmail.com | Y.Ramya | |
| 6 | charithareddy3914@gmail.com | P.charitha reddy | |
| 7 | gayathripolepalli70@gmail.com | POLEPALLI. GAYATHRI | |
| 8 | syedtasleem07@gmail.com | Syed Tasleem Afroze | |
| 9 | sowjanyaathota11@gmail.com | T.SOWJANYA | |
| 10 | tammasahithi1@gmail.com | Tamma Sahithi | |
| 11 | podilisarayu6@gmail.com | PODILI LAKSHMISARAYU | |
| 12 | shaikkarishma811@gmail.com | shaik karishma | |
| 13 | kumarvalaparla890@gmail.com | Venkata Aravind Kumar.V | |
| 14 | patchachinnu3@gmail.com | Patcha Jaswanth | |
| 15 | manu952041@gmail.com | Pachipulusu Manohar | |
| 16 | vanukuri.raghava@gmail.com | Raghava | |
| 17 | shaiksakina05@gmail.com | Shaik sameer | |
| 18 | us465249@gmail.com | S sk usman | |
| 19 | vallu.srinu756939@gmail.com | Vallu Srinu Siva Subrahmanyam | |
| 20 | undelachandraobulareddy@gmail.com | Undela Chandra Obula Reddy | |
| | ROLL NUMBER | FATHER NAME | MOTHER NAME \ |
| 0 | 21KP1A44C5 | Venna Ramanareddy | Venna Lakshmid devi |
| 1 | 21KP1A4468 | N.Manikya Rao | N.Sri Lakshmi |
| 2 | 21KP1A4488 | Rama Chandra Rao | Venkateswaramma |
| 3 | 21KP1A44D1 | Yeruva Ajay Kumar reddy | Yeruva Anjali Devi |
| 4 | 22kp5a4402 | B.lakshmaiah | B.veramma |
| 5 | 21KP1A44C8 | Y.Anjaiah | Y Lakshmi Rajyam |
| 6 | 21KP1A4475 | P.Madhava Reddy | P.Kavitha |
| 7 | 21KP1A4481 | POLEPALLI. GURUBRAHMA CHARI | POLEPALLI.SRIDEVI |

| | | | |
|----|------------|---------------------------|---------------------|
| 8 | 21KP1A44A9 | Syed Rahiman | Syed Naseema |
| 9 | 21KP1A44B6 | T.SAMBA SIVA RAO | T.ARUNA KUMARI |
| 10 | 21KP1A44B0 | Tamma krishna reddy | Tamma Padmavathi |
| 11 | 21KP1A4480 | PODILI RAMESH | PODILI ADILAKSHMI |
| 12 | 21KP1A4496 | SHAIK BAJI | SHAIK KHADRUN |
| 13 | 21KP1A44C0 | Veeraswamy.v | Lakshmi.v |
| 14 | 21KP1A4477 | Patcha apparao | Patcha sukanya |
| 15 | 21KP1A4472 | Pachipulusu Prasad | Pachipulusu Bhavani |
| 16 | 21KP1A44C3 | Srinivasa reddy | Jyothi |
| 17 | 21KP1A44A3 | Shaik Rahim babu | Shaik Raziya |
| 18 | 21KP1A4492 | S sk mastan vali | Mahabobba |
| 19 | 21KP1A44C1 | Vallu Srinivasa Rao | Vallu Surya kumari |
| 20 | 21KP1A44B9 | Undela Chinna Obula Reddy | Undela GuruLakshmi |

| | COURSE | CGPA | AGE | BRANCH \ |
|----|--------|------|-----|--|
| 0 | DS | 8 | 19 | Data science |
| 1 | CSE | 83 | 19 | CSE-DS |
| 2 | MECH | 7 | 20 | mech |
| 3 | CSE | 9.5 | 20 | CSE |
| 4 | DS | 0.72 | 23 | Computer science |
| 5 | DS | 80 | 19 | CSD |
| 6 | DS | 70 | 19 | CSD |
| 7 | DS | 10 | 19 | Data Science |
| 8 | MECH | 8 | 19 | DS |
| 9 | DS | 8 | 19 | DATA SCIENCE |
| 10 | DS | 7.7 | 19 | CSE (Data science) |
| 11 | DS | 7.5 | 19 | DATA SCIENCE |
| 12 | DS | 9 | 19 | ds |
| 13 | DS | 0.98 | 20 | Data Science |
| 14 | CSE | 0.99 | 20 | Data science |
| 15 | MECH | 8.5 | 19 | 19 |
| 16 | DS | 7 | 19 | Data science |
| 17 | DS | 80 | 20 | DS |
| 18 | DS | 50 | 19 | DS |
| 19 | DS | 73 | 20 | Computer Science Engineering& Data Science |
| 20 | DS | 9.2 | 20 | Computer Science |

| | SEMISTER | AADHAAR NO |
|----|----------|--------------|
| 0 | 2-2 | 636336922883 |
| 1 | II-II | 602515258256 |
| 2 | 4 | 930319053088 |
| 3 | 2-3 | 576154990146 |
| 4 | 2-2 | 895444662410 |
| 5 | 2-2 | 724574588425 |
| 6 | 2.2 | 810177524502 |
| 7 | 2-2 | 721819168061 |
| 8 | 2-2 | 617020354793 |
| 9 | 2-2 | 338666948901 |
| 10 | 2-2 | 685349832128 |
| 11 | 2-2 | 458689741091 |
| 12 | 2-2 | 663048521599 |
| 13 | 2-2 | 510305345824 |

| | | |
|----|-----|--------------|
| 14 | 2-2 | 744020413963 |
| 15 | 2-2 | 559366114423 |
| 16 | 2-2 | 424973081348 |
| 17 | 2-2 | 529261464345 |
| 18 | 2-2 | 568753875709 |
| 19 | 4 | ***** |
| 20 | 2-2 | 693621780842 |

```
df.replace({'70':70},inplace=True)
print(df)
```

OUTPUT:

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|-------------|--|-------------------------------|
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| 13 | kumarvalaparla890@gmail.com | Venkata Aravind Kumar.V |
| 14 | patchachinnu3@gmail.com | Patcha Jaswanth |
| 15 | manu952041@gmail.com | Pachipulusu Manohar |
| 16 | vanukuri.raghava@gmail.com | Raghava |
| 17 | shaiksakina05@gmail.com | Shaik sameer |
| 18 | us465249@gmail.com | S sk usman |
| 19 | vallu.srinu756939@gmail.com | Vallu Srinu Siva Subrahmanyam |
| 20 | undelachandraobulareddy@gmail.com | Undela Chandra Obula Reddy |
| ROLL NUMBER | FATHER NAME | MOTHER NAME |
| 0 | 21KP1A44C5 Venna Ramanareddy | Venna Lakshmid devi |
| 1 | 21KP1A4468 N.Manikya Rao | N.Sri Lakshmi |
| 2 | 21KP1A4488 Rama Chandra Rao | Venkateswaramma |
| 3 | 21KP1A44D1 Yeruva Ajay Kumar reddy | Yeruva Anjali Devi |
| 4 | 22kp5a4402 B.lakshmaiah | B.veramma |
| 5 | 21KP1A44C8 Y.Anjaiah | Y Lakshmi Rajyam |
| 6 | 21KP1A4475 P.Madhava Reddy | P.Kavitha |
| 7 | 21KP1A4481 POLEPALLI. GURUBRAHMA CHARI | POLEPALLI.SRIDEVI |
| 8 | 21KP1A44A9 Syed Rahiman | Syed Naseema |
| 9 | 21KP1A44B6 T.SAMBA SIVA RAO | T.ARUNA KUMARI |
| 10 | 21KP1A44B0 Tamma krishna reddy | Tamma Padmavathi |
| 11 | 21KP1A4480 PODILI RAMESH | PODILI ADILAKSHMI |
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| 13 | 21KP1A44C0 Veeraswamy.v | Lakshmi.v |
| 14 | 21KP1A4477 Patcha apparao | Patcha sukanya |
| 15 | 21KP1A4472 Pachipulusu Prasad | Pachipulusu Bhavani |
| 16 | 21KP1A44C3 Srinivasa reddy | Jyothi |
| 17 | 21KP1A44A3 Shaik Rahim babu | Shaik Raziya |

| | | | |
|----|------------|---------------------------|--------------------|
| 18 | 21KP1A4492 | S sk mastan vali | Mahabobba |
| 19 | 21KP1A44C1 | Vallu Srinivasa Rao | Vallu Surya kumari |
| 20 | 21KP1A44B9 | Undela Chinna Obula Reddy | Undela GuruLakshmi |
| | COURSE | CGPA | AGE |
| 0 | DS | 8.00 | 19 |
| 1 | CSE | 83.00 | 19 |
| 2 | MECH | 7.00 | 20 |
| 3 | CSE | 9.50 | 20 |
| 4 | DS | 0.72 | 23 |
| 5 | DS | 80.00 | 19 |
| 6 | DS | 70.00 | 19 |
| 7 | DS | 10.00 | 19 |
| 8 | MECH | 8.00 | 19 |
| 9 | DS | 8.00 | 19 |
| 10 | DS | 7.70 | 19 |
| 11 | DS | 7.50 | 19 |
| 12 | DS | 9.00 | 19 |
| 13 | DS | 0.98 | 20 |
| 14 | CSE | 0.99 | 20 |
| 15 | MECH | 8.50 | 19 |
| 16 | DS | 7.00 | 19 |
| 17 | DS | 80.00 | 20 |
| 18 | DS | 50.00 | 19 |
| 19 | DS | 73.00 | 20 |
| 20 | DS | 9.20 | 20 |

OUTPUT:

| | | |
|----|-----------------------------------|-------------------------------|
| | Gmail | STUDENT NAME \ |
| 0 | vennachandana1@gmail.com | Venna Chandana |
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| 17 | shaiksakina05@gmail.com | Shaik sameer |
| 18 | us465249@gmail.com | S sk usman |
| 19 | vallu.srinu756939@gmail.com | Vallu Srinu Siva Subrahmanyam |
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| 4 | 22kp5a4402 | B.lakshmaiah | B.veramma |
| 5 | 21KP1A44C8 | Y.Anjaiah | Y Lakshmi Rajyam |
| 6 | 21KP1A4475 | P.Madhava Reddy | P.Kavitha |
| 7 | 21KP1A4481 | POLEPALLI. GURUBRAHMA CHARI | POLEPALLI.SRIDEVI |
| 8 | 21KP1A44A9 | Syed Rahiman | Syed Naseema |
| 9 | 21KP1A44B6 | T.SAMBA SIVA RAO | T.ARUNA KUMARI |
| 10 | 21KP1A44B0 | Tamma krishna reddy | Tamma Padmavathi |
| 11 | 21KP1A4480 | PODILI RAMESH | PODILI ADILAKSHMI |
| 12 | 21KP1A4496 | SHAIK BAJI | SHAIK KHADRUN |
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| 16 | 21KP1A44C3 | Srinivasa reddy | Jyothi |
| 17 | 21KP1A44A3 | Shaik Rahim babu | Shaik Raziya |
| 18 | 21KP1A4492 | S sk mastan vali | Mahabobba |
| 19 | 21KP1A44C1 | Vallu Srinivasa Rao | Vallu Surya kumari |
| 20 | 21KP1A44B9 | Undela Chinna Obula Reddy | Undela GuruLakshmi |

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| 7 | DS | 10 | 19 | Data Science |
| 8 | MECH | 8 | 19 | DS |
| 9 | DS | 8 | 19 | DATA SCIENCE |
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| | SEMISTER | AADHAAR NO |
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| | | |
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Gmail

| | |
|----|-----------------------------------|
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| 7 | gayathripolepalli70@gmail.com |
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| 9 | sowjanyaathotal1@gmail.com |
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| 11 | podilisarayu6@gmail.com |
| 12 | shaikkarishma811@gmail.com |
| 13 | kumarvalaparla890@gmail.com |
| 14 | patchachinnu3@gmail.com |
| 15 | manu952041@gmail.com |
| 16 | vanukuri.raghava@gmail.com |
| 17 | shaiksakina05@gmail.com |
| 18 | us465249@gmail.com |
| 19 | vallu.srinu756939@gmail.com |
| 20 | undelachandraobulareddy@gmail.com |

STUDENT NAME \

| |
|-------------------------------|
| Venna Chandana |
| N.Venkatesh |
| Sravan Kumar |
| Yeruva sandeep reddy |
| B.sivaji |
| Y.Ramya |
| P.charitha reddy |
| POLEPALLI. GAYATHRI |
| Syed Tasleem Afroze |
| T.SOWJANYA |
| Tamma Sahithi |
| PODILI LAKSHMISARAYU |
| shaik karishma |
| Venkata Aravind Kumar.V |
| Patcha Jaswanth |
| Pachipulusu Manohar |
| Raghava |
| Shaik sameer |
| S sk usman |
| Vallu Srinu Siva Subrahmanyam |
| Undela Chandra Obula Reddy |

SEMISTER AADHAAR NO

| | | |
|---|-------|--------------|
| 0 | 2-2 | 636336922883 |
| 1 | II-II | 602515258256 |
| 2 | 4 | 930319053088 |
| 3 | 2-3 | 576154990146 |
| 4 | 2-2 | 895444662410 |

| | | |
|----|-----|--------------|
| 5 | 2-2 | 724574588425 |
| 6 | 2.2 | 810177524502 |
| 7 | 2-2 | 721819168061 |
| 8 | 2-2 | 617020354793 |
| 9 | 2-2 | 338666948901 |
| 10 | 2-2 | 685349832128 |
| 11 | 2-2 | 458689741091 |
| 12 | 2-2 | 663048521599 |
| 13 | 2-2 | 510305345824 |
| 14 | 2-2 | 744020413963 |
| 15 | 2-2 | 559366114423 |
| 16 | 2-2 | 424973081348 |
| 17 | 2-2 | 529261464345 |
| 18 | 2-2 | 568753875709 |
| 19 | 4 | ***** |
| 20 | 2-2 | 693621780842 |

```
df.replace({'70':70},inplace=True)
print(df)
```

OUTPUT:

| | Gmail | STUDENT NAME \ | |
|----|-----------------------------------|-------------------------------|---------------------|
| 0 | vennachandana1@gmail.com | Venna Chandana | |
| 1 | adilakshmi4765@gmail.com | N.Venkatesh | |
| 2 | sravankumar7156@gmail.com | Sravan Kumar | |
| 3 | sandeepyeruva1124@gmail.com | Yeruva sandeep reddy | |
| 4 | sivajibejjanki@gmail.com | B.sivaji | |
| 5 | ramyayalabolu123r@gmail.com | Y.Ramya | |
| 6 | charithareddy3914@gmail.com | P.charitha reddy | |
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| 9 | sowjanyaathota11@gmail.com | T.SOWJANYA | |
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| 17 | 21KP1A44A3 | Shaik Rahim babu | Shaik Raziya |
| 18 | 21KP1A4492 | S sk mastan vali | Mahabobba |
| 19 | 21KP1A44C1 | Vallu Srinivasa Rao | Vallu Surya kumari |
| 20 | 21KP1A44B9 | Undela Chinna Obula Reddy | Undela GuruLakshmi |

```
df.info()
```

OUTPUT:

```
<class 'pandas.core.frame.DataFrame'>
```

```
RangeIndex: 52 entries, 0 to 51
```

```
Data columns (total 11 columns):
```

| # | Column | Non-Null Count | Dtype |
|----|--------------|----------------|---------|
| 0 | Gmail | 52 non-null | object |
| 1 | STUDENT NAME | 52 non-null | object |
| 2 | ROLL NUMBER | 52 non-null | object |
| 3 | FATHER NAME | 52 non-null | object |
| 4 | MOTHER NAME | 52 non-null | object |
| 5 | COURSE | 52 non-null | object |
| 6 | CGPA | 52 non-null | float64 |
| 7 | AGE | 52 non-null | object |
| 8 | BRANCH | 52 non-null | object |
| 9 | SEMISTER | 52 non-null | object |
| 10 | AADHAAR NO | 52 non-null | object |

```
dtypes: float64(1), object(10)
```

```
memory usage: 4.6+ KB
```

```
#filtering the data who got less than or greater than 60% and
arranging those students in ascending order
cgpa=df[(df["CGPA"]>8.0)]
cgpa
```

OUTPUT:

| Gmail | STUDENT NAME | ROLL NUMBER | FATHER NAME | MOTHER NAME | COURSE | CGPA | AGE | BRANCH | SEMISTER | AADHAAR NO |
|-------|-----------------------------|----------------------|-------------|-------------------------|--------------------|------|------|--------|----------|--------------------|
| 1 | adilakshmi4765@gmail.com | N.Venkatesh | 21KP1A4468 | N.Manikya Rao | N.Sri Lakshmi | CS E | 83.0 | 19 | CSE-DS | II-II 602515258256 |
| 3 | sandeepyeruva1124@gmail.com | Yeruva sandeep reddy | 21KP1A44D1 | Yeruva Ajay Kumar reddy | Yeruva Anjali Devi | CS E | 9.5 | 20 | CSE | 2-3 576154990146 |
| 5 | ramyayalabolu12 | Y.Ramy | 21KP | Y.Anjaiah | Y Lakshmi | DS | 80 | 19 | CSD | 2-2 72457 |

| G m ail | STUDENT NAME | ROLL NUMB ER | FAT HER NAM E | MOTHER NAME | COURSE | C G PA | A G E | BR AN CH | SEMI STER | AAD HAA R NO | |
|---------------|-----------------------------------|--|------------------------|---|---------------------------|--------------|-------------|----------------|--|-----------------------|----------------------|
| | 3r@gmail.com | a | 1A44 C8 | | Rajyam | | .0 | | | | 45884 25 |
| 6 | charithareddy3914@gmail.com | P.charitha reddy | 21KP 1A44 75 | P.Madhava Reddy | P.Kavitha | DS | 70 .0 | 19 | CSD | 2.2 | 81017 75245 02 |
| 7 | gayathripolepalli70@gmail.com | POLEP ALLI. GAYA THRI | 21KP 1A44 81 | POLEPALL I. GURUBRA HMA CHARI | POLEPAL LI.SRIDE VI | DS | 10 .0 | 19 | Data Scienc e | 2-2 | 72181 91680 61 |
| 12 | shaikkarishma811@gmail.com | shaik karishm a | 21KP 1A44 96 | SHAIK BAJI | SHAIK KHADRU N | DS | 9. 0 | 19 | ds | 2-2 | 66304 85215 99 |
| 15 | manu952041@gmail.com | Pachipu lusu Manoha r | 21KP 1A44 72 | Pachipulusu Prasad | Pachipulus u Bhavani | M EC H | 8. 5 | 19 | 19 | 2-2 | 55936 61144 23 |
| 17 | shaiksakina05@gmail.com | Shaik sameer | 21KP 1A44 A3 | Shaik Rahim babu | Shaik Raziya | DS | 80 .0 | 20 | DS | 2-2 | 52926 14643 45 |
| 18 | us465249@gmail.com | S sk usman | 21KP 1A44 92 | S sk mastan vali | Mahabobb a | DS | 50 .0 | 19 | DS | 2-2 | 56875 38757 09 |
| 19 | vallu.srinu756939@gmail.com | Vallu Srinu Siva Subrah manya m | 21KP 1A44 C1 | Vallu Srinivasa Rao | Vallu Surya kumari | DS | 73 .0 | 20 | Comp uter Scienc e Engin eering & Data Scienc e | 4 | ***** ***** ** |
| 20 | undelachandraobulareddy@gmail.com | Undela Chandra Obula Reddy | 21KP 1A44 B9 | Undela Chinna Obula Reddy | Undela GuruLaksh mi | DS | 9. 2 | 20 | Comp uter Scienc e | 2-2 | 69362 17808 42 |
| 22 | anushayalabolu12 | Anusha | 21KP | Chinna | Lakshmi | DS | 75 | 19 | CSD | 2-2 | 83078 |

| G m ail | STUDENT NAME | ROLL NUMB ER | FAT HER NAM E | MOTHER NAME | COURSE | C G PA | A G E | BR AN CH | SEMI STER | AAD HAA R NO | |
|---------------|-------------------------------|-----------------------------|------------------------|--------------------------|-------------------------|--------------|-------------|----------------|---------------------|-----------------------|----------------------|
| | @gmail.com | yalabol u | 1A44 C7 | anjayya | narayanam a | | .0 | | | | 50660 37 |
| 23 | madhulathasure9 @gmail.com | SURE. MADH ULATH A | 21KP 1A44 A4 | SURE.VIS WANADH AM | SURE.SAI LAKSHM I | DS | 10 .0 | 20 | Data scienc e | 2-2 | 77648 60626 08 |
| 25 | shiakmobin2002 @gmail.com | Shaikm obin | 21KP 1A44 97 | shaik karimullah | Shaik rihana | DS | 8. 8 | 21 | Ds | 2.2 | 90435 56564 68 |
| 27 | ravuakshaya@gm ail.com | Ravu.ak shaya | 21KP 1A44 85 | Ravu.sriniv asrao | Ravu.arun a kumari | DS | 80 .0 | 19 | Ds | 2.2 | 54430 57831 28 |

OUTPUT:

| | Gmail | STUDENT NAME | ROLL NUMBER | FATHER NAME | MOTHER NAME | COURSE | CG PA | AGE | BRA NCH | SEMI-STER | AADH AAR NO |
|---|-----------------------------|----------------------|-------------|-------------------------|--------------------|--------|-------|-----|------------------|-----------|--------------|
| 0 | vennachandana1@gmail.com | Venna Chandana | 21KP1A44C5 | Venna Ramanareddy | Venna Lakshmid evi | DS | 8.00 | 19 | Data science | 2-2 | 636336922883 |
| 1 | adilakshmi4765@gmail.com | N.Venkatesh | 21KP1A4468 | N.Manikya Rao | N.Sri Lakshmi | CSE | 83.00 | 19 | CSE-DS | II-II | 602515258256 |
| 2 | sravankumar7156@gmail.com | Sravan Kumar | 21KP1A4488 | Rama Chandr a Rao | Venkateswaramma | MECH | 7.00 | 20 | mech | 4 | 930319053088 |
| 3 | sandeepyeruva1124@gmail.com | Yeruvasandee p reddy | 21KP1A44D1 | Yeruva Ajay Kumar reddy | Yeruva Anjali Devi | CSE | 9.50 | 20 | CSE | 2-3 | 576154990146 |
| 4 | sivajibejjanki@gmail.com | B.sivaji | 22kp5a4402 | B.lakshmaiah | B.veramma | DS | 0.72 | 23 | Computer science | 2-2 | 895444662410 |

In [29]:


```
df.nlargest(52,columns=['CGPA'])
```

OUTPUT:

| | Gmail | STUDENT NAME | ROLL NUMBER | FATHER NAME | MOTHER NAME | COURSE | CGPA | AGE | BRANCH | SEMESTER | AADHAR NO |
|----|-------------------------------|--------------------------------------|----------------|-----------------------------------|--------------------------------------|--------|-----------|-----|--------------------------|---------------------|------------------|
| 38 | abdulabdul22070@gmail.com | Syed.Abdul Rehaman | 21KP1 A44A6 | Syed.M eera Sharif | Bandi.Kr ishna veni | DS | 90. 00 | 20 | DS | 2-2 | 347853 509974 |
| 48 | sriharshanallabothu@gmail.com | Nallabot hu. Sri Harsha | 21KP1 A4469 | Nallabot hu. Anjaney ulu | Nallabot hu. Anitha | DS | 90. 00 | 21 | CSD | 2-2 | 208611 060176 |
| 50 | arundathi0508@gmail.com | PANDA UMA ARUND ATHI | 21KP1 A4474 | PANDA NARA YANA RAO | PANDA PRASA NNA LAKSH MI | DS | 87. 00 | 19 | CSD | 2-2 | 652650 486629 |
| 1 | adilakshmi4765@gmail.com | N.Venka tesh | 21KP1 A4468 | N.Mani kya Rao | N.Sri Lakshmi | CSE | 83. 00 | 19 | CSE-DS | II-II | 602515 258256 |
| 51 | chinnivignesh144@gmail.com | chinni vignesh teja yadav | 21KP1 A44C6 | Chinni Pratap Kumar | Chinni Bhargavi | DS | 80. 00 | 19 | Data Science | 4th semes ter | 639534 870436 |
| 44 | saidashaik371@gmail.com | SHAIK SAIDA ANWA R BASHA | 21KP1 A44A2 | SHAIK KUDH AN VALI | SHAIK SAIDA HUSSA NBI | DS | 80. 00 | 20 | DATAS CIENCE | 2-2 | 466722 650274 |
| 36 | nikitharayapati9@gmail.com | Nikhitha Rayapati | 21KP1 A4487 | Rayapat i hanumat hrao | Rayapati malleswa ri | DS | 80. 00 | 19 | Ds | 2-2 | 963360 828294 |
| 27 | ravuakshaya@gmail.com | Ravu.ak shaya | 21KP1 A4485 | Ravu.sri nivasrao | Ravu.aru na kumari | DS | 80. 00 | 19 | Ds | 2.2 | 544305 783128 |
| 43 | paladugudurga1@gmail.com | P. Durga Sri | 21KP1 A4473 | P. Amares wara rao | P. Seshu Kumari | DS | 80. 00 | 20 | CSD(Da ta Science) | 2-2 | 692162 661608 |

| | Gmail | STUDENT NAME | ROLL NUMBER | FATHER NAME | MOTHER NAME | COURSE | CGPA | AGE | BRANCH | SEMESTER | AADHAR NO |
|----|------------------------------------|--------------|-------------|------------------|--------------------|--------|-------|-----|------------------|----------|--------------|
| 17 | shaiksakina05@gmail.com | Shaik sameer | 21KP1 A44A3 | Shaik Rahim babu | Shaik Raziya | DS | 80.00 | 20 | DS | 2-2 | 529261464345 |
| 5 | ramyayalabolu123@gmail.com | Y.Ramya | 21KP1 A44C8 | Y.Anjiah | Y Lakshmi Rajyam | DS | 80.00 | 19 | CSD | 2-2 | 724574588425 |
| 24 | thammisettysrikant hraj9@gmail.com | T.Srikanth | 21KP1 A44B5 | T.vasu | T.jaya | DS | 0.75 | 19 | Data Science | 2-2 | 673112205183 |
| 4 | sivajibejjanki@gmail.com | B.sivaji | 22kp5a 4402 | B.lakshmaiah | B.veramma | DS | 0.72 | 23 | Computer science | 2-2 | 895444662410 |
| 21 | farukh.786syed@gmail.com | SYED.FARUKH | 21KP1 A44A7 | SYED.BAJI | SYED.SARTHAJ BEGUM | DS | 0.70 | 19 | DS | 2-2 | 764320730678 |

In [30]:

```
df.nsmallest(52,columns=['CGPA'])
```

OUTPUT:

| | Gmail | STUDENT NAME | ROLL NUMBER | FATHER NAME | MOTHER NAME | COURSE | CGPA | AGE | BRANCH | SEMESTER | AADHAR NO |
|----|---------------------------------|-------------------|-------------|-----------------------|---------------------|--------|-------|-----|--------------|----------|--------------|
| 31 | harikabangaram313@gmail.com | Harika | 22KP5 A4401 | A.Subramanyam | A.Dhana Bhagya m | DS | 75.00 | 19 | Data science | 2-2 | 574930568520 |
| 42 | thiriveedhinagajyothi@gmail.com | T. Nagajyothi | 21KP1 A44B7 | T. Venkayya | T. Raman jamma | DS | 75.00 | 19 | DS | 4 | 330477145525 |
| 41 | reshmayalamanchi@gmail.com | Reshma yalamanchi | 21KP1 A44C9 | Yalaman chi subba Rao | Yalam anchi sunitha | DS | 75.00 | 19 | DS | 4 | 742366316353 |
| 22 | anushayalabolu12@gmail.com | Anusha yalabolu | 21KP1 A44C7 | Chinna anjayya | Laksh mi naraya | DS | 75.00 | 19 | CSD | 2-2 | 830785066037 |

Out[30]:

| | Gmail | STUDENT NAME | ROLL NUMBER | FATHER NAME | MOTHER NAME | COURSE | CG PA | AGE | BRANCH | SEMI-STER | AADHAR NO |
|----|-----------------------------|-------------------------|-------------|-----------------------|-----------------------|--------|-------|-----|-------------------|--------------|--------------|
| | | | | | nama | | | | | | |
| 17 | shaiksakina05@gmail.com | Shaik sameer | 21KP1 A44A3 | Shaik Rahim babu | Shaik Raziya | DS | 80.00 | 20 | DS | 2-2 | 529261464345 |
| 5 | ramyayalabolu123r@gmail.com | Y.Ramya | 21KP1 A44C8 | Y.Anjaiah | Y Lakshmi Rajyam | DS | 80.00 | 19 | CSD | 2-2 | 724574588425 |
| 44 | saidashaik371@gmail.com | SHAIK SAIDANWAR BASHA | 21KP1 A44A2 | SHAIK KUDHAN VALI | SHAIK SAIDAHUSSANBI | DS | 80.00 | 20 | DATASCIENCE | 2-2 | 466722650274 |
| 51 | chinnivignesh144@gmail.com | chinnivignesh tejayadav | 21KP1 A44C6 | Chinni Pratap Kumar | Chinni Bhargavi | DS | 80.00 | 19 | Data Science | 4th semester | 639534870436 |
| 36 | nikitharayapati9@gmail.com | Nikhitha Rayapati | 21KP1 A4487 | Rayapati hanumat hrao | Rayapati malleswari | DS | 80.00 | 19 | Ds | 2-2 | 963360828294 |
| 27 | ravuakshaya@gmail.com | Ravu.akshaya | 21KP1 A4485 | Ravu.srinivasrao | Ravu.aruna kumari | DS | 80.00 | 19 | Ds | 2.2 | 544305783128 |
| 43 | paladugudurga1@gmail.com | P. Durga Sri | 21KP1 A4473 | P. Amarewarao | P. Seshu Kumari | DS | 80.00 | 20 | CSD(Data Science) | 2-2 | 692162661608 |
| 1 | adilakshmi4765@gmail.com | N.Venkatesh | 21KP1 A4468 | N.Manikya Rao | N.Sri Lakshmi | CSE | 83.00 | 19 | CSE-DS | II-II | 602515258256 |
| 50 | arundathi0508@gmail.com | PANDARUN DATHI | 21KP1 A4474 | PANDANARAYANARAO | PANDAPRASANNA LAKSHMI | DS | 87.00 | 19 | CSD | 2-2 | 652650486629 |

```
gr=df.groupby(['AGE','BRANCH'])
gr.first()
```

OUTPUT:

| | Gmail | STUDENT NAME \ |
|----|-----------------------------------|-------------------------------|
| 0 | vennachandana1@gmail.com | Venna Chandana |
| 4 | sivajibejjanki@gmail.com | B.sivaji |
| 5 | ramyayalabolul23r@gmail.com | Y. Ramya |
| 6 | charithareddy3914@gmail.com | P.charitha reddy |
| 7 | gayathriplepalli70@gmail.com | POLEPALLI. GAYATHRI |
| 9 | sowjanyahtotal1@gmail.com | T. SOWJANYA |
| 10 | tammasahithil@gmail.com | Tamma Sahithi |
| 11 | podilisarayu6@gmail.com | PODILI LAKSHMISARAYU |
| 12 | shaikkarishma811@gmail.com | shaik karishma |
| 13 | kumarvalaparla890@gmail.com | Venkata Aravind Kumar.V |
| 16 | vanukuri.raghava@gmail.com | Raghava |
| 17 | shaiksakina05@gmail.com | Shaik sameer |
| 18 | us465249@gmail.com | S sk usman |
| 19 | vallu.srinu756939@gmail.com | Vallu Srinu Siva Subrahmanyam |
| 20 | undelachandraobulareddy@gmail.com | Undela Chandra Obula Reddy |
| 21 | farukh.786syed@gmail.com | SYED. FARUKH |
| 22 | anushayalabolul2@gmail.com | Anusha yalabolu |
| 23 | madhulathasure9@gmail.com | SURE. MADHULATHA |
| 24 | thammisettysrikanthraj9@gmail.com | T. Srikanth |
| 25 | shiakmobin2002@gmail.com | Shaikmobin |
| 27 | ravuakshaya@gmail.com | Ravu. akshaya |
| 29 | ynagasasikumar@gmail.com | Y Naga Sasi Kumar |
| 30 | rahamtunnisashaik09@gmail.com | Shaik Rahamtunnisa |
| 31 | harikabangaram313@gmail.com | Harika |
| 32 | indupriya72216@gmail.com | Indu Priya Patcha |

```
x=df.groupby('COURSE').get_group('DS')
print(x)
```

OUTPUT:

| Gmail | STUDENT NAME \ | |
|-------|-----------------------------------|-------------------------------|
| 0 | vennachandana1@gmail.com | Venna Chandana |
| 4 | sivajibejjanki@gmail.com | B.sivaji |
| 5 | ramyayalabolu123r@gmail.com | Y.Ramya |
| 6 | charithareddy3914@gmail.com | P.charitha reddy |
| 7 | gayathripolepalli70@gmail.com | POLEPALLI. GAYATHRI |
| 9 | sowjanyaatha11@gmail.com | T.SOWJANYA |
| 10 | tammasahithi1@gmail.com | Tamma Sahithi |
| 11 | podilisarayu6@gmail.com | PODILI LAKSHMISARAYU |
| 12 | shaikkarishma811@gmail.com | shaik karishma |
| 13 | kumarvalaparla890@gmail.com | Venkata Aravind Kumar.V |
| 16 | vanukuri.raghava@gmail.com | Raghava |
| 17 | shaiksakina05@gmail.com | Shaik sameer |
| 18 | us465249@gmail.com | S sk usman |
| 19 | vallu.srinu756939@gmail.com | Vallu Srinu Siva Subrahmanyam |
| 20 | undelachandraobulareddy@gmail.com | Undela Chandra Obula Reddy |

| | CGPA | AGE | BRANCH | SEMISTER \ |
|----|-------|-----|--|------------|
| 0 | 8.00 | 19 | Data science | 2-2 |
| 4 | 0.72 | 23 | Computer science | 2-2 |
| 5 | 80.00 | 19 | CSD | 2-2 |
| 6 | 70.00 | 19 | CSD | 2.2 |
| 7 | 10.00 | 19 | Data Science | 2-2 |
| 9 | 8.00 | 19 | DATA SCIENCE | 2-2 |
| 10 | 7.70 | 19 | CSE (Data science) | 2-2 |
| 11 | 7.50 | 19 | DATA SCIENCE | 2-2 |
| 12 | 9.00 | 19 | ds | 2-2 |
| 13 | 0.98 | 20 | Data Science | 2-2 |
| 16 | 7.00 | 19 | Data science | 2-2 |
| 17 | 80.00 | 20 | DS | 2-2 |
| 18 | 50.00 | 19 | DS | 2-2 |
| 19 | 73.00 | 20 | Computer Science Engineering& Data Science | 4 |
| 20 | 9.20 | 20 | Computer Science | 2-2 |
| 21 | 0.70 | 19 | DS | 2-2 |

| | AADHAAR NO |
|----|--------------|
| 0 | 636336922883 |
| 4 | 895444662410 |
| 5 | 724574588425 |
| 6 | 810177524502 |
| 7 | 721819168061 |
| 9 | 338666948901 |
| 10 | 685349832128 |
| 11 | 458689741091 |
| 12 | 663048521599 |
| 13 | 510305345824 |

```

16 424973081348
17 529261464345
18 568753875709
19 *****
20 693621780842

```

```

df.replace(['18h'],18,inplace=True)
print(df)

```

OUTPUT:

| | Gmail | STUDENT NAME \ |
|----|-----------------------------------|-------------------------------|
| 0 | vennachandana1@gmail.com | Venna Chandana |
| 1 | adilakshmi4765@gmail.com | N.Venkatesh |
| 2 | sravankumar7156@gmail.com | Sravan Kumar |
| 3 | sandeepyeruva1124@gmail.com | Yeruva sandeep reddy |
| 4 | sivajibejjanki@gmail.com | B.sivaji |
| 5 | ramyayalabolu123r@gmail.com | Y.Ramya |
| 6 | charithareddy3914@gmail.com | P.charitha reddy |
| 7 | gayathriplepalli70@gmail.com | POLEPALLI. GAYATHRI |
| 8 | syedtasleem07@gmail.com | Syed Tasleem Afroze |
| 9 | sowjanyaatha11@gmail.com | T.SOWJANYA |
| 10 | tammasahithi1@gmail.com | Tamma Sahithi |
| 11 | podilisarayu6@gmail.com | PODILI LAKSHMISARAYU |
| 12 | shaikkarishma811@gmail.com | shaik karishma |
| 13 | kumarvalaparla890@gmail.com | Venkata Aravind Kumar.V |
| 14 | patchachinnu3@gmail.com | Patcha Jaswanth |
| 15 | manu952041@gmail.com | Pachipulusu Manohar |
| 16 | vanukuri.raghava@gmail.com | Raghava |
| 17 | shaiksakina05@gmail.com | Shaik sameer |
| 18 | us465249@gmail.com | S sk usman |
| 19 | vallu.srinu756939@gmail.com | Vallu Srinu Siva Subrahmanyam |
| 20 | undelachandraobulareddy@gmail.com | Undela Chandra Obula Reddy |

| | COURSE | CGPA | AGE | BRANCH \ |
|---|--------|-------|-----|------------------|
| 0 | DS | 8.00 | 19 | Data science |
| 1 | CSE | 83.00 | 19 | CSE-DS |
| 2 | MECH | 7.00 | 20 | mech |
| 3 | CSE | 9.50 | 20 | CSE |
| 4 | DS | 0.72 | 23 | Computer science |
| 5 | DS | 80.00 | 19 | CSD |
| 6 | DS | 70.00 | 19 | CSD |

| | | | | |
|----|------|-------|----|--|
| 7 | DS | 10.00 | 19 | Data Science |
| 8 | MECH | 8.00 | 19 | DS |
| 9 | DS | 8.00 | 19 | DATA SCIENCE |
| 10 | DS | 7.70 | 19 | CSE (Data science) |
| 11 | DS | 7.50 | 19 | DATA SCIENCE |
| 12 | DS | 9.00 | 19 | ds |
| 13 | DS | 0.98 | 20 | Data Science |
| 14 | CSE | 0.99 | 20 | Data science |
| 15 | MECH | 8.50 | 19 | 19 |
| 16 | DS | 7.00 | 19 | Data science |
| 17 | DS | 80.00 | 20 | DS |
| 18 | DS | 50.00 | 19 | DS |
| 19 | DS | 73.00 | 20 | Computer Science Engineering& Data Science |
| 20 | DS | 9.20 | 20 | Computer Science |

```
gr_mech=df.groupby('COURSE').get_group('MECH')
gr_mech
```

OUTPUT:

Gmail STUDENT NAME ROLL NUMBER FATHER NAME MOTHER NAME COURSE CGPA AGE BRANCH SEMI-STER AADHAR NO

N02sravankumar7156@gmail.com Sravan Kumar 21KP1A4488 Rama Chandra Rao Venkateswaramma MECH7.020mech49303190530888 syedtasleem07@gmail.com Syed Tasleem Afroze 21KP1A44A9 Syed Rahiman Syed Naseema MECH8.019DS2-261702035479315manu952041@gmail.com Pachipulusu Manohar 21KP1A4472 Pachipulusu Prasad Pachipulusu Bhavani MECH8.519192-2559366114423

```
gr_cse=df.groupby('COURSE').get_group('CSE')
gr_cse
```

| Gmail | STUDENT NAME | ROLL NUMBER | FATHER NAME | MOTHER NAME | COURSE | CGPA | AGE | BRANCH | SEMI-STER | AADHAR NO |
|-------|-----------------------------|----------------------|-------------|-------------------------|--------------------|------|-------|--------|-----------|--------------------|
| 1 | adilakshmi4765@gmail.com | N.Venkatesh | 21KP1A4468 | N.Manikya Rao | N.Sri Lakshmi | CS E | 83.00 | 19 | CSE-DS | II-II 602515258256 |
| 3 | sandeepyeruva1124@gmail.com | Yeruva sandeep reddy | 21KP1A44D1 | Yeruva Ajay Kumar reddy | Yeruva Anjali Devi | CS E | 9.50 | 20 | CSE | 2-3 576154990146 |
| 14 | patchachinnu3@gmail.com | Patcha | 21KP1 | Patcha | Patcha | CS | 0. | 20 | Data | 2-2 744020 |

| G ma il | STUDENT NAME | ROL L NUM BER | FATH ER NAM E | MOTHE R NAME | COU RSE | CG PA | A G E | BRA NCH | SEMI STER | AAD HAA R NO |
|---------------|--|--|------------------------|------------------------------|---------------------------------------|----------|---------------|------------|-----------------------------|----------------------|
| | l.com | Jaswa nth | A4477 | apparao | sukanya a | E | 99 | | scienc e | 413963 |
| 28 | hemasanjushasanikom mu828@gmail.com | hema sanjus ha | 21KP1 A4491 | musalare ddy | sivapar vathi | CS E | 73 .0 0 | 18 | cse | 2-2 422314 863763 |
| 34 | sudhamshavejendla@ gmail.com | Vejen dla Devi Sri Sudha msha | 21KP1 A44C4 | Vejendla Srinivass Rao | Vejend la Laxmi Prasan na | CS E | 70 .0 0 | 19 | Cse- Data Scienc e | 2_2 587480 445790 |
| 37 | indhupotla123@gmail .com | indhu priya | 21KP1 A4483 | Lakshma narayana | Sujath a | CS E | 72 .0 0 | 19 | cse | 2-2 524345 891620 |
| 39 | jaffershaik718@gmail .com | Jaffer shaik | 21KP1 A4495 | shaik.Lai Laha | shaik. Ramja n bee | CS E | 70 .0 0 | 19 | cse | 2nd 912229 276699 |
| 47 | saisairam068@gmail. com | Saira m | 21kp1a 44b4 | Venkata subbiah | Ravan amma | CS E | 10 .0 0 | 19 | Da | 2-2 746109 575146 |

In [64]:

```
age19=df.groupby('AGE').get_group(19)
age19
```

OUTPUT:

| G m ail | STUDENT NAME | ROLL NUMBE R | FATH ER NAM E | MOTH ER NAME | COURSE | C GP A | A G E | BRA NC H | SEM ISTE R | AAD HAA R NO |
|---------------|------------------------------|--------------------|------------------------|--------------------------|------------------------------|--------------|-------------|----------------|---------------------|--------------------------|
| 0 | vennachandana1 @gmail.com | Venna Chandana | 21KP1 A44C 5 | Venna Ramana reddy | Venna Lakshmi de vi | DS | 8. 00 | 19 | Data scienc e | 2-2 63633 69228 83 |
| 1 | adilakshmi4765@ | N.Venkat | 21KP1 | N.Mani | N.Sri | CS | 83 | 19 | CSE- | II-II 60251 |

| G m ail | STUDENT NAME | ROLL NUMBE R | FATH ER NAM E | MOTH ER NAME | COURSE | C GP A | A G E | BRA NC H | SEM ISTE R | AAD HAA R NO |
|------------------------|-------------------------------|---------------------------------|----------------------------------|---|---------------------------|-----------------------|----------------------|-------------------------|------------------------------|-----------------------------|
| | gmail.com | esh | A4468 | kya Rao | Lakshmi | E | .0 0 | | DS | 52582 56 |
| 5 | ramyayalabolu123r@gmail.com | Y.Ramya | 21KP1 A44C 8 | Y.Anjai ah | Y Lakshmi Rajyam | DS | 80 .0 0 | 19 | CSD | 2-2 72457 45884 25 |
| 6 | charithareddy3914@gmail.com | P.charitha reddy | 21KP1 A4475 | P.Madh ava Reddy | P.Kavitha | DS | 70 .0 0 | 19 | CSD | 2.2 81017 75245 02 |
| 7 | gayathripolepalli70@gmail.com | POLEPA LLI. GAYATH RI | 21KP1 A4481 | POLEP ALLI. GURUB RAHM A CHARI | POLEPAL LI.SRIDE VI | DS | 10 .0 0 | 19 | Data Scien ce | 2-2 72181 91680 61 |
| 8 | syedtasleem07@gmail.com | Syed Tasleem Afroze | 21KP1 A44A 9 | Syed Rahima n | Syed Naseema | M EC H | 8. 00 | 19 | DS | 2-2 61702 03547 93 |
| 9 | sowjanya11@gmail.com | T.SOWJA NYA | 21KP1 A44B 6 | T.SAM BA SIVA RAO | T.ARUNA KUMARI | DS | 8. 00 | 19 | DAT A SCIE NCE | 2-2 33866 69489 01 |
| 10 | tammasahithi1@gmail.com | Tamma Sahithi | 21KP1 A44B 0 | Tamma krishna reddy | Tamma Padmavath i | DS | 7. 70 | 19 | CSE (Data scienc e) | 2-2 68534 98321 28 |
| 11 | podilisarayu6@gmail.com | PODILI LAKSHM ISARAY U | 21KP1 A4480 | PODILI RAMES H | PODILI ADILAKS HMI | DS | 7. 50 | 19 | DAT A SCIE NCE | 2-2 45868 97410 91 |
| 12 | shaikkarishma811@gmail.com | shaik karishma | 21KP1 A4496 | SHAIK BAJI | SHAIK KHADRU N | DS | 9. 00 | 19 | ds | 2-2 66304 85215 99 |
| 15 | manu952041@gmail.com | Pachipulu su Manohar | 21KP1 A4472 | Pachipul usu Prasad | Pachipulus u Bhavani | M EC H | 8. 50 | 19 | 19 | 2-2 55936 61144 23 |
| 16 | vanukuri.raghava@gmail.com | Raghava | 21KP1 A44C | Srinivas a reddy | Jyothi | DS | 7. 00 | 19 | Data scienc | 2-2 42497 30813 |

| G m ail | STUDENT NAME | ROLL NUMBE R | FATH ER NAM E | MOTH ER NAME | COURSE | C GP A | A G E | BRA NC H | SEM ISTE R | AAD HAA R NO | |
|---------------|--------------------------------------|---------------------------------------|------------------------|-----------------------------------|-------------------------------|--------------|---------------|----------------|-----------------------------|--------------------|----------------------|
| | | | 3 | | | | | | e | | 48 |
| 18 | us465249@gmail.com | S sk usman | 21KP1 A4492 | S sk mastan vali | Mahabobb a | DS | 50 .0 0 | 19 | DS | 2-2 | 56875 38757 09 |
| 21 | farukh.786syed@gmail.com | SYED.FA RUKH | 21KP1 A44A 7 | SYED.B AJI | SYED.SA RTHAJ BEGUM | DS | 0. 70 | 19 | DS | 2-2 | 76432 07306 78 |
| 22 | anushayalabolu12@gmail.com | Anusha yalabolu | 21KP1 A44C 7 | Chinna anjayya | Lakshmi narayanam a | DS | 75 .0 0 | 19 | CSD | 2-2 | 83078 50660 37 |
| 24 | thammisettsrika nthraj9@gmail.com | T.Srikanth | 21KP1 A44B 5 | T.vasu | T.jaya | DS | 0. 75 | 19 | Data Scien ce | 2-2 | 67311 22051 83 |
| 27 | ravuakshaya@gmail.com | Ravu.aksh aya | 21KP1 A4485 | Ravu.sri nivasrao | Ravu.aruna kumari | DS | 80 .0 0 | 19 | Ds | 2.2 | 54430 57831 28 |
| 31 | harikabangaram3 13@gmail.com | Harika | 22KP5 A4401 | A.Subra manyam | A.Dhana Bhagyam | DS | 75 .0 0 | 19 | Data scienc e | 2-2 | 57493 05685 20 |
| 33 | bhavyasrisajja200 3@gmail.com | Bhavya sri | 21KP1 A4490 | Mohan krishna | Usha rani | DS | 70 .0 0 | 19 | Ds | 2-2 | 27473 68900 47 |
| 34 | sudhamshavejend la@gmail.com | Vejendla Devi Sri Sudhamsh a | 21KP1 A44C 4 | Vejendl a Srinivas s Rao | Vejendla Laxmi Prasanna | CS E | 70 .0 0 | 19 | Cse- Data Scien ce | 2_2 | 58748 04457 90 |

```
age20=df.groupby('AGE').get_group(20)
```

OUTPUT:

| G m ail | STUDENT NAME | ROL L NU MBE R | FATHE R NAME | MOTH ER NAME | COURSE | CG PA | A GE | BRA NCH | SEMI STER | AAD HAA R NO |
|---------------|--------------|----------------------------|--------------------|--------------------|--------|----------|---------|------------|--------------|--------------------|
|---------------|--------------|----------------------------|--------------------|--------------------|--------|----------|---------|------------|--------------|--------------------|

| G ma il | STUDENT NAME | ROL L NU MBE R | FATHE R NAME | MOTH ER NAME | COURSE | CG PA | A GE | BRA NCH | SEMI STER | AAD HAA R NO | |
|---------------|-----------------------------|----------------------------|--------------------|-------------------------|--------------------|----------|---------|------------|---------------|--------------------|--------------|
| 2 | sravankumar7156@gmail.com | Sravan Kumar | 21KP1A4488 | Rama Chandr a Rao | Venkates waramma | ME CH | 7.00 | 20 | mech | 4 | 930319053088 |
| 3 | sandeepyeruva1124@gmail.com | Yeruva sandeep redd y | 21KP1A44D1 | Yeruva Ajay Kumar reddy | Yeruva Anjali Devi | CS E | 9.50 | 20 | CSE | 2-3 | 576154990146 |
| 13 | kumarvalaparla890@gmail.com | Venk ata Aravi nd Kum ar.V | 21KP1A44C0 | Veeras wamy.v | Lakshmi.v | DS | 0.98 | 20 | Data Scien ce | 2-2 | 510305345824 |
| 14 | patchachinnu3@gmail.com | Patc ha Jasw anth | 21KP1A4477 | Patcha appara o | Patcha sukanya | CS E | 0.99 | 20 | Data scien ce | 2-2 | 744020413963 |
| 17 | shaiksakina05@gmail.com | Shaik same er | 21KP1A44A3 | Shaik Rahim babu | Shaik Raziya | DS | 80.00 | 20 | DS | 2-2 | 529261464345 |
| 19 | vallu.srinu756939@gmail.com | Vallu Srinu Siva Subr | | | | | | | | | |

```
gr_ds=df.groupby('COURSE').get_group('DS')
gr_ds
```

OUTPUT:

| G m ail | STUDENT NAME | ROLL NUMBE R | FAT HER NAM E | MOTHER NAME | COURSE | C G P A | A G E | BR AN CH | SEMI STER | AAD HAA R NO | |
|---------------|------------------------------|------------------------|------------------------|-------------------------------|---------------------|------------------|-------------|----------------|---------------------|-----------------------|----------------------|
| 0 | vennachandana1@gmail.com | Venna Chandana | 21KP1A44C5 | Venna Ramanareddy | Venna Lakshmid evi | DS | 8.00 | 19 | Data scienc e | 2-2 | 63633 69228 83 |
| 4 | sivajibejjanki@gmail.com | B.sivaji | 22kp5a4402 | B.lakshmai ah | B.veramm a | DS | 0.72 | 23 | Comp uter scienc e | 2-2 | 89544 46624 10 |
| 5 | ramyayalabolu123r@gmail.com | Y.Ramya | 21KP1A44C8 | Y.Anjaiah | Y Lakshmi Rajyam | DS | 80.00 | 19 | CSD | 2-2 | 72457 45884 25 |
| 6 | charithareddy3914@gmail.com | P.charitha reddy | 21KP1A4475 | P.Madhava Reddy | P.Kavitha | DS | 70.00 | 19 | CSD | 2.2 | 81017 75245 02 |
| 7 | gayathriplepalli70@gmail.com | POLEPAL LI. GAYAT HRI | 21KP1A4481 | POLEPAL LI. GURUBRA HMA CHARI | POLEPAL LI.SRIDE VI | DS | 10.00 | 19 | Data Scien ce | 2-2 | 72181 91680 61 |
| 9 | sowjanyaathota11@gmail.com | T.SOWJ ANYA | 21KP1A44B6 | T.SAMBA SIVA RAO | T.ARUNA KUMARI | DS | 8.00 | 19 | DAT A SCIE NCE | 2-2 | 33866 69489 01 |
| 10 | tammasahithi1@gmail.com | Tamma Sahithi | 21KP1A44B0 | Tamma krishna reddy | Tamma Padmavat hi | DS | 7.70 | 19 | CSE (Data scienc e) | 2-2 | 68534 98321 28 |
| 11 | podilisarayu6@gmail.com | PODILI LAKSH MISARA YU | 21KP1A4480 | PODILI RAMESH | PODILI ADILAKS HMI | DS | 7.50 | 19 | DAT A SCIE NCE | 2-2 | 45868 97410 91 |
| 12 | shaikkarishma811@gmail.com | shaik karishma | 21KP1A4496 | SHAIK BAJI | SHAIK KHADRU N | DS | 9.00 | 19 | ds | 2-2 | 66304 85215 99 |
| 13 | kumarvalaparla8 | Venkata | 21KP | Veeraswam | Lakshmi.v | DS | 0. | 20 | Data | 2-2 | 51030 |

| G m ail | STUDENT NAME | ROLL NUMBE R | FAT HER NAM E | MOTHER NAME | COURSE | C G P A | A G E | BR AN CH | SEMI STER | AAD HAA R NO | |
|---------------|---|--|------------------------|------------------------------------|---------------------------|------------------|---------------|----------------|--|-----------------------|----------------------|
| | 90@gmail.com | Aravind Kumar.V | 1A44 C0 | y.v | | | 98 | | Scien ce | | 53458 24 |
| 16 | vanukuri.raghava @gmail.com | Raghava | 21KP 1A44 C3 | Srinivasa reddy | Jyothi | DS | 7. 00 | 19 | Data scienc e | 2-2 | 42497 30813 48 |
| 17 | shaiksakina05@g mail.com | Shaik sameer | 21KP 1A44 A3 | Shaik Rahim babu | Shaik Raziya | DS | 80 .0 0 | 20 | DS | 2-2 | 52926 14643 45 |
| 18 | us465249@gmail .com | S sk usman | 21KP 1A44 92 | S sk mastan vali | Mahabobb a | DS | 50 .0 0 | 19 | DS | 2-2 | 56875 38757 09 |
| 19 | vallu.srinu75693 9@gmail.com | Vallu Srinu Siva Subrahm anyam | 21KP 1A44 C1 | Vallu Srinivasa Rao | Vallu Surya kumari | DS | 73 .0 0 | 20 | Comp uter Scien ce Engin eering & Data Scien ce | 4 | ***** ***** ** |
| 20 | undelachandraob ulareddy@gmail. com | Undela Chandra Obula Reddy | 21KP 1A44 B9 | Undela Chinna Obula Reddy | Undela GuruLaks hmi | DS | 9. 20 | 20 | Comp uter Scien ce | 2-2 | 69362 17808 42 |
| 21 | farukh.786syed@ gmail.com | SYED.F ARUKH | 21KP 1A44 A7 | SYED.BAJ I | SYED.SA RTHAJ BEGUM | DS | 0. 70 | 19 | DS | 2-2 | 76432 07306 78 |
| 22 | anushayalabolu1 2@gmail.com | Anusha yalabolu | 21KP 1A44 C7 | Chinna anjayya | Lakshmi narayanam a | DS | 75 .0 0 | 19 | CSD | 2-2 | 83078 50660 37 |
| 23 | madhulathasure9 @gmail.com | SURE. MADHU LATHA | 21KP 1A44 A4 | SURE.VIS WANADH AM | SURE.SAI LAKSHM I | DS | 10 .0 0 | 20 | Data scienc e | 2-2 | 77648 60626 08 |
| 24 | thammisettsrika nthraj9@gmail.c om | T.Srikant h | 21KP 1A44 B5 | T.vasu | T.jaya | DS | 0. 75 | 19 | Data Scien ce | 2-2 | 67311 22051 83 |

| G m ail | STUDENT NAME | ROLL NUMBE R | FAT HER NAM E | MOTHER NAME | COURSE | C G P A | A G E | BR AN CH | SEMI STER | AAD HAA R NO | |
|------------------------|-----------------------------------|--|----------------------------------|-----------------------------|------------------------|----------------------------|----------------------|-------------------------|----------------------|---------------------------------|----------------------|
| 25 | shiakmobin2002@gmail.com | Shaikmobin | 21KP 1A44 97 | shaik karimullah | Shaik rihana | DS | 8. 80 | 21 | Ds | 2.2 | 90435 56564 68 |
| 27 | ravuakshaya@gmail.com | Ravu.aks haya | 21KP 1A44 85 | Ravu.sriniv asrao | Ravu.arun a kumari | DS | 80 .0 0 | 19 | Ds | 2.2 | 54430 57831 28 |
| 29 | ynagasasikumar@gmail.com | Y Naga Sasi Kumar | 21KP 1A44 D0 | Y Rama mohanarao | Y Lalitha | DS | 9. 20 | 20 | 20 | 2-2 | 44817 24962 92 |
| 30 | rahamtunnisashai k09@gmail.com | Shaik Rahamtu nnisa | 21KP 1A44 A0 | Shaik.maha boobjani | Shaik.mun ni | DS | 8. 00 | 18 | Data scienc e | 2-2 | 40697 61693 51 |
| 31 | harikabangaram3 13@gmail.com | Harika | 22KP 5A44 01 | A.Subrama nyam | A.Dhana Bhagyam | DS | 75 .0 0 | 19 | Data scienc e | 2-2 | 57493 05685 20 |
| 32 | indupriya72216 @gmail.com | Indu Priya Patcha | 21KP 1A44 76 | Appa rao Patcha | Renuka Patcha | DS | 0. 75 | 18 | Data Scien ce | 2-2 | 57304 18809 49 |
| 33 | bhavyasrisajja20 03@gmail.com | Bhavya sri | 21KP 1A44 90 | Mohan krishna | Usha rani | DS | 70 .0 0 | 19 | Ds | 2-2 | 27473 68900 47 |
| 35 | bhanuthanirru@g mail.com | Thanirru Bhanu venkata prasad | 21KP 1A44 B2 | T sathyanaray ana | T rama devi | DS | 9. 60 | 19 | 19 | 2-2 | 35722 82028 35 |
| 36 | nikitharayapati9 @gmail.com | Nikhitha Rayapati | 21KP 1A44 87 | Rayapati hanumathra o | Rayapati malleswari | DS | 80 .0 0 | 19 | Ds | 2-2 | 96336 08282 94 |
| 38 | abdulabdul22070 @gmail.com | Syed.Abd ul Rehaman | 21KP 1A44 A6 | Syed.Meera Sharif | Bandi.Kris hna veni | DS | 90 .0 0 | 20 | DS | 2-2 | 34785 35099 74 |
| 40 | rabbanishaik7356 @gmail.com | SHAIK RABBA NI | 21KP 1A44 99 | SHAIK MOHAMM AD HANIF | SHAIK MALIN | DS | 9. 50 | 21 | CSD | 2-2 | 20593 39562 04 |
| 41 | reshmayalamanc hi@gmail.com | Reshma yalamanc | 21KP 1A44 | Yalamanchi subba Rao | Yalamanc hi sunitha | DS | 75 .0 | 19 | DS | 4 | 74236 63163 |

| Gmail | STUDENT NAME | ROLL NUMBER | FATHER NAME | MOTHER NAME | COURSE | CGPA | AGE | BRANCH | SEMESTER | AADHAR NO |
|-------|--------------|-------------|-------------|-------------|--------|------|-----|--------|----------|-----------|
| | | hi | C9 | | | | 0 | | | 53 |

```
age18=df.groupby('AGE').get_group(18)
age18
```

OUTPUT:

GmailSTUDENT NAMEROLL NUMBERFATHER NAMEMOTHER NAMECOURSECGPAAGEBRANCHSEMISTERAADHAAR NO28hemasanjushasanikommu828@gmail.comhema sanjusha21KP1A4491musalareddysivaparvathiCSE73.0018cse2-242231486376330rahamtunnisashaik09@gmail.comShaik Rahamtunnisa21KP1A44A0Shaik.mahaboobjaniShaik.munniDS8.0018Data science2-240697616935132indupriya72216@gmail.comIndu Priya Patcha21KP1A4476Appa rao PatchaRenuka PatchaDS0.7518Data Science2-2573041880949

PLOTTING A BAR GRAPH:

```
age18.plot.bar(color=['blue','yellow','green'])
age18
```

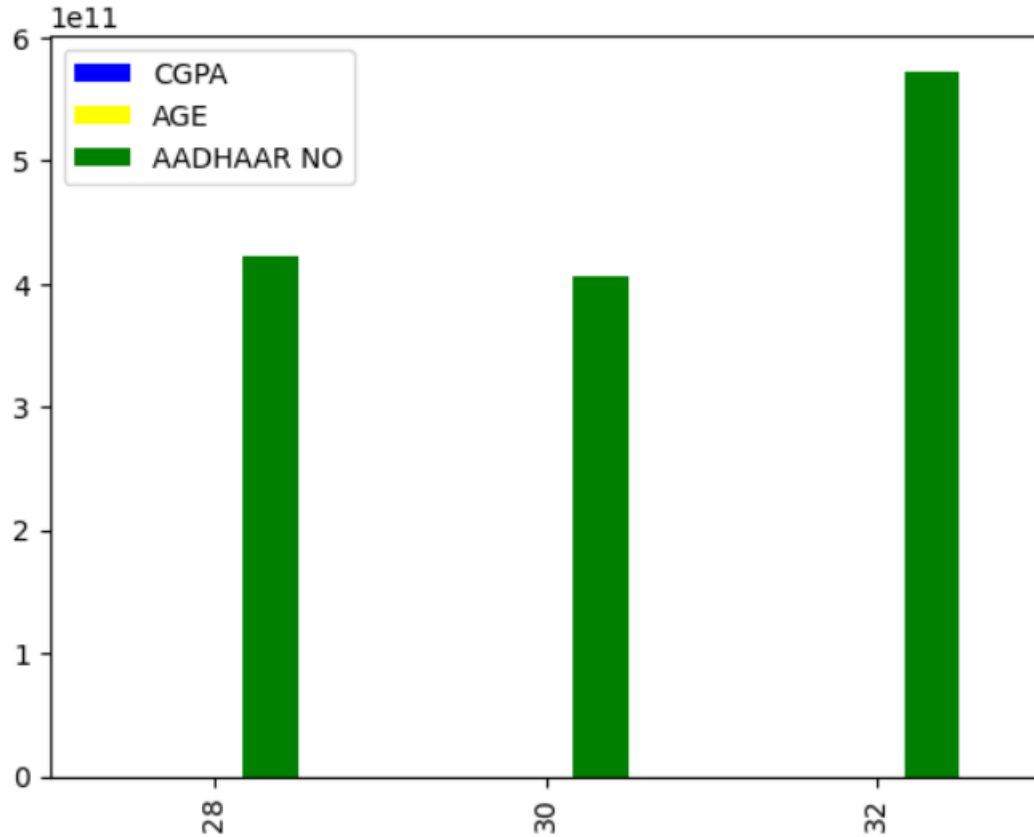
OUTPUT:

| Gmail | STUDENT NAME | ROLL NUMBER | FATHER NAME | MOTHER NAME | COURSE | CGPA | AGE | BRANCH | SEMESTER | AADHAR NO |
|-------|------------------------------------|--------------------|-------------|--------------------|---------------|------|-------|--------|--------------|------------------|
| 28 | hemasanjushasanikommu828@gmail.com | hema sanjusha | 21KP1A4491 | musalareddy | sivaparvathi | CSE | 73.00 | 18 | cse | 2-2 422314863763 |
| 30 | rahamtunnisashaik09@gmail.com | Shaik Rahamtunnisa | 21KP1A44A0 | Shaik.mahaboobjani | Shaik.munni | DS | 8.00 | 18 | Data science | 2-2 406976169351 |
| 32 | indupriya72216@gmail.com | Indu Priya Patcha | 21KP1A4476 | Appa rao Patcha | Renuka Patcha | DS | 0.75 | 18 | Data Science | 2-2 573041880949 |

The below graph shows about the bar graph of the given data who is above 18.

28 30 32

VISUALIZING THE BAR GRAPH WHO IS ABOVE 18 AGE IN THE DATA:



In [74]:

BAR GRAPH:

Here we are plotting a bar graph by using some colors like blue,yellow,red.
By using these colors we are plotting a bar graph by using the data.

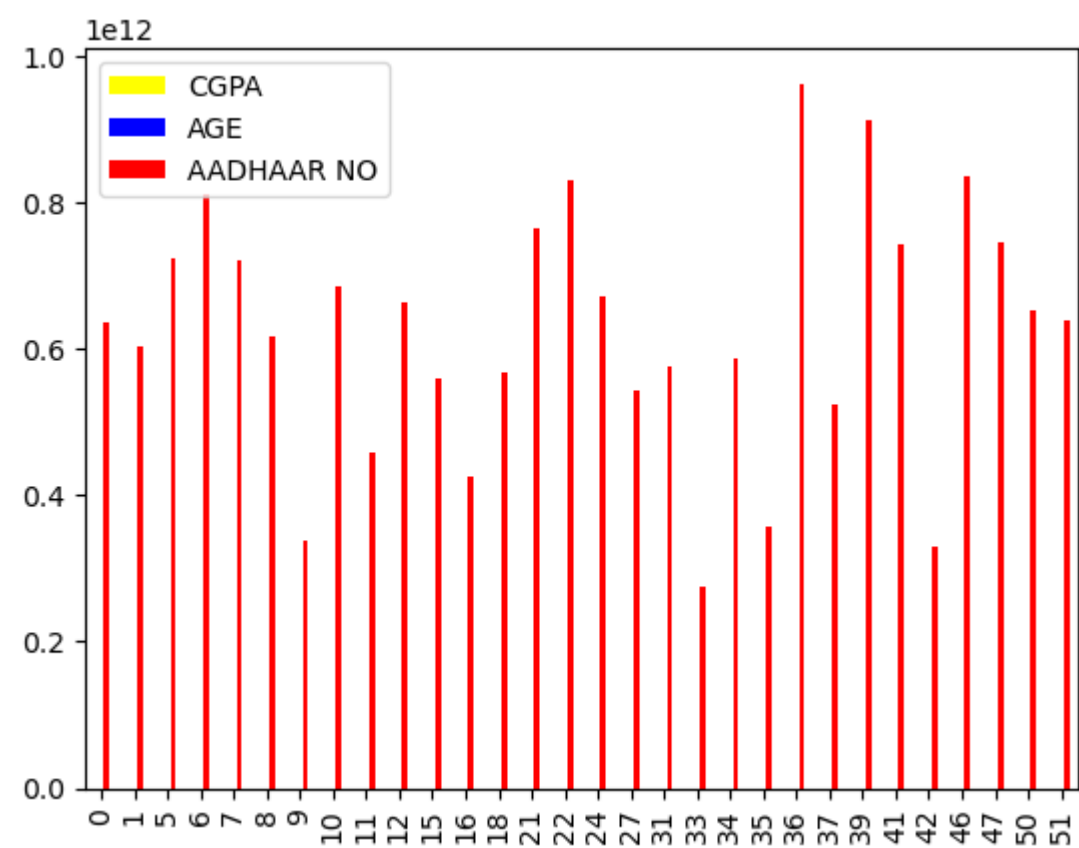

```
age19.plot.bar(color=['yellow','blue','red'])
age19
```

OUTPUT:

| G m ail | STUDENT NAME | ROLL NUMBE R | FATH ER NAM E | MOTH ER NAME | COURSE | C GP A | A G E | BRA NC H | SEM ISTE R | AAD HAA R NO | |
|---------------|-------------------------------|-----------------------|------------------------|--------------------------------|---------------------|--------------|-------------|----------------|---------------------|--------------------|----------------|
| 0 | vennachandana1@gmail.com | Venna Chandana | 21KP1 A44C5 | Venna Ramana reddy | Venna Lakshmi de vi | DS | 8.00 | 19 | Data scienc e | 2-2 | 63633 69228 83 |
| 1 | adilakshmi4765@gmail.com | N.Venkat esh | 21KP1 A4468 | N.Mani kya Rao | N.Sri Lakshmi | CS E | 83.00 | 19 | CSE-DS | II-II | 60251 52582 56 |
| 5 | ramyayalabolu123r@gmail.com | Y.Ramya | 21KP1 A44C8 | Y.Anjai ah | Y Lakshmi Rajyam | DS | 80.00 | 19 | CSD | 2-2 | 72457 45884 25 |
| 6 | charithareddy3914@gmail.com | P.charitha reddy | 21KP1 A4475 | P.Madh ava Reddy | P.Kavitha | DS | 70.00 | 19 | CSD | 2.2 | 81017 75245 02 |
| 7 | gayathripolepalli70@gmail.com | POLEPA LLI. GAYATH RI | 21KP1 A4481 | POLEP ALLI. GURUB RAHM A CHARI | POLEPAL LI.SRIDE VI | DS | 10.00 | 19 | Data Scien ce | 2-2 | 72181 91680 61 |
| 8 | syedtasleem07@gmail.com | Syed Tasleem Afroze | 21KP1 A44A9 | Syed Rahima n | Syed Naseema | M EC H | 8.00 | 19 | DS | 2-2 | 61702 03547 93 |
| 9 | sowjanya11@gmail.com | T.SOWJA NYA | 21KP1 A44B6 | T.SAM BA SIVA RAO | T.ARUNA KUMARI | DS | 8.00 | 19 | DAT A SCIE NCE | 2-2 | 33866 69489 01 |
| 10 | tammasahithi1@gmail.com | Tamma Sahithi | 21KP1 A44B0 | Tamma krishna reddy | Tamma Padmavath i | DS | 7.70 | 19 | CSE (Data scienc e) | 2-2 | 68534 98321 28 |

| G m ail | STUDENT NAME | ROLL NUMBE R | FATH ER NAM E | MOTH ER NAME | COURSE | C GP A | A G E | BRA NC H | SEM ISTE R | AAD HAA R NO | |
|---------------|---------------------------------------|---------------------------------|------------------------|---------------------------|---------------------------|--------------|---------------|----------------|-------------------------|--------------------|----------------------|
| 11 | podilisarayu6@gmail.com | PODILI LAKSHM ISARAY U | 21KP1 A4480 | PODILI RAMES H | PODILI ADILAKS HMI | DS | 7. 50 | 19 | DAT A SCIE NCE | 2-2 | 45868 97410 91 |
| 12 | shaikkarishma811@gmail.com | shaik karishma | 21KP1 A4496 | SHAIK BAJI | SHAIK KHADRU N | DS | 9. 00 | 19 | ds | 2-2 | 66304 85215 99 |
| 15 | manu952041@gmail.com | Pachipulu su Manohar | 21KP1 A4472 | Pachipul usu Prasad | Pachipulus u Bhavani | M EC H | 8. 50 | 19 | 19 | 2-2 | 55936 61144 23 |
| 16 | vanukuri.raghava@gmail.com | Raghava | 21KP1 A44C 3 | Srinivas a reddy | Jyothi | DS | 7. 00 | 19 | Data scienc e | 2-2 | 42497 30813 48 |
| 18 | us465249@gmail.com | S sk usman | 21KP1 A4492 | S sk mastan vali | Mahabobb a | DS | 50 .0 0 | 19 | DS | 2-2 | 56875 38757 09 |
| 21 | farukh.786syed@gmail.com | SYED.FA RUKH | 21KP1 A44A 7 | SYED.B AJI | SYED.SA RTHAJ BEGUM | DS | 0. 70 | 19 | DS | 2-2 | 76432 07306 78 |
| 22 | anushayalabolu12@gmail.com | Anusha yalabolu | 21KP1 A44C 7 | Chinna anjayya | Lakshmi narayanam a | DS | 75 .0 0 | 19 | CSD | 2-2 | 83078 50660 37 |
| 24 | thammisettysrika nthraj9@gmail.com | T.Srikanth | 21KP1 A44B 5 | T.vasu | T.jaya | DS | 0. 75 | 19 | Data Scien ce | 2-2 | 67311 22051 83 |
| 27 | ravuakshaya@gmail.com | Ravu.aksh aya | 21KP1 A4485 | Ravu.sri nivasrao | Ravu.aruna kumari | DS | 80 .0 0 | 19 | Ds | 2.2 | 54430 57831 28 |
| 31 | harikabangaram313@gmail.com | Harika | 22KP5 A4401 | A.Subra manyam | A.Dhana Bhagyam | DS | 75 .0 0 | 19 | Data scienc e | 2-2 | 57493 05685 20 |
| 33 | bhavyasrisajja2003@gmail.com | Bhavya sri | 21KP1 A4490 | Mohan krishna | Usha rani | DS | 70 .0 0 | 19 | Ds | 2-2 | 27473 68900 47 |

VISUALIZING THE GRAPH OF AGE WHO IS 19 YEARS:



BAR GRAPH:

Here we are plotting a bar graph by using some colors like red,green,blue.
By using these colors we are plotting a bar graph by using the data.

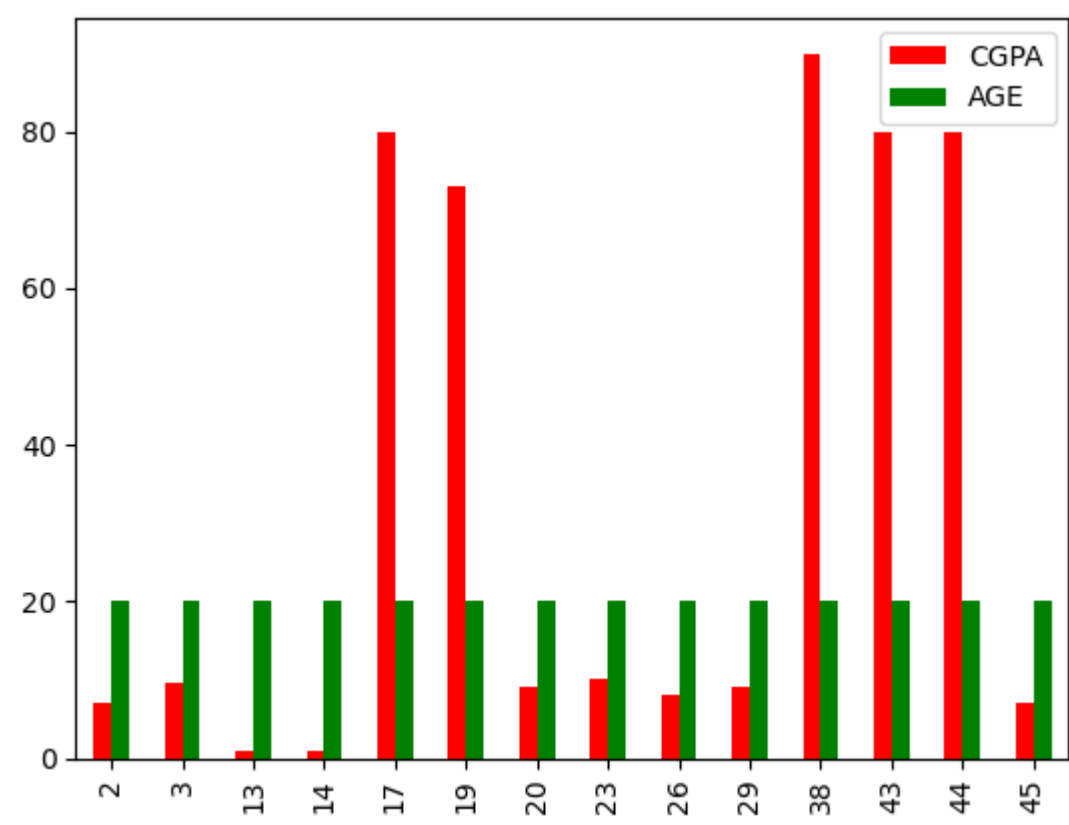
```
age20.plot.bar(color=['red','green','blue'])
age20
```

OUTPUT:

| G m ail | STUDENT NAME | ROLL NUMB ER | FAT HER NAM E | MOTHER NAME | COURS E | C G PA | A G E | BR AN CH | SEMIS TER | AAD HAA R NO | |
|---------------|----------------------------------|-------------------------------|------------------------|---------------------------|--------------------|--------------|---------------|----------------|---|-----------------------|----------------------|
| 2 | sravankumar7156@gmail.com | Sravan Kumar | 21KP 1A448 8 | Rama Chandra Rao | Venkateswarama | M EC H | 7. 00 | 20 | mech | 4 | 93031 90530 88 |
| 3 | sandeepyeruval124@gmail.com | Yeruva sandeep reddy | 21KP 1A44 D1 | Yeruva Ajay Kumar reddy | Yeruva Anjali Devi | CS E | 9. 50 | 20 | CSE | 2-3 | 57615 49901 46 |
| 13 | kumarvalaparla890@gmail.com | Venkata Aravind Kumar. V | 21KP 1A44 C0 | Veeraswamy.v | Lakshmi .v | DS | 0. 98 | 20 | Data Science | 2-2 | 51030 53458 24 |
| 14 | patchachinnu3@gmail.com | Patcha Jaswanth | 21KP 1A447 7 | Patcha apparao | Patcha sukanya | CS E | 0. 99 | 20 | Data science | 2-2 | 74402 04139 63 |
| 17 | shaiksakina05@gmail.com | Shaik sameer | 21KP 1A44 A3 | Shaik Rahim babu | Shaik Raziya | DS | 80 .0 0 | 20 | DS | 2-2 | 52926 14643 45 |
| 19 | vallu.srinu756939@gmail.com | Vallu Srinu Siva Subrahmanyam | 21KP 1A44 C1 | Vallu Srinivasa Rao | Vallu Surya kumari | DS | 73 .0 0 | 20 | Computer Science Engineering & Data Science | 4 | ***** ***** ** |
| 20 | undelachandraobularedy@gmail.com | Undela Chandra Obula Reddy | 21KP 1A44 B9 | Undela Chinna Obula Reddy | Undela GuruLakshmi | DS | 9. 20 | 20 | Computer Science | 2-2 | 69362 17808 42 |
| 23 | madhulathasure9@gmail.com | SURE. MADHULATH | 21KP 1A44 A4 | SURE.VISWANADHAM | SURE.SAI LAKSH | DS | 10 .0 0 | 20 | Data science | 2-2 | 77648 60626 08 |

| G m ail | STUDENT NAME | ROLL NUMB ER | FAT HER NAM E | MOTHER NAME | COURS E | C G PA | A G E | BR AN CH | SEMIS TER | AAD HAA R NO |
|---------------|---------------------------|--------------------------------------|------------------------|-------------------------|--------------------------------|--------------|---------------|----------------|------------------------------|-----------------------------|
| | | A | | | MI | | | | | |
| 26 | abdulkhadar6842@gmail.com | Shaik.A bdul Khadar | 21KP 1A449 3 | Shaik.Kareem | Shaik.Fa rjana | EC E | 8. 00 | 20 | 20 | 2-2 33470 82891 54 |
| 29 | ynagasasikumar@gmail.com | Y Naga Sasi Kumar | 21KP 1A44 D0 | Y Rama mohanarao | Y Lalitha | DS | 9. 20 | 20 | 20 | 2-2 44817 24962 92 |
| 38 | abdulabdul22070@gmail.com | Syed.A bdul Rehaman | 21KP 1A44 A6 | Syed.Meera Sharif | Bandi.K rishna veni | DS | 90 .0 0 | 20 | DS | 2-2 34785 35099 74 |
| 43 | paladugudurga1@gmail.com | P. Durga Sri | 21KP 1A447 3 | P. Amareswara rao | P. Seshu Kumari | DS | 80 .0 0 | 20 | CSD(D ata Science) | 2-2 69216 26616 08 |
| 44 | saidashaik371@gmail.com | SHAIK SAIDA ANWA R BASHA | 21KP 1A44 A2 | SHAIK KUDHAN VALI | SHAIK SAIDA HUSSA NBI | DS | 80 .0 0 | 20 | DATA SCIEN CE | 2-2 46672 26502 74 |
| 55 5 | mvkbn1312@gmail.com | R.M.V. K.Brah ma Naidu | 21KP 1A448 9 | Yedukondal u | Nirmala | DS | 7. 00 | 20 | Data science | 2-2 2387 7088 9424 |

VISUALIZING THE BAR GRAPH OF 20 YEARS:



BAR GRAPH:

Here we are plotting a bar graph by using some colors like purple,yellow,black.
using these colors we are plotting a bar graph by using the data.

By

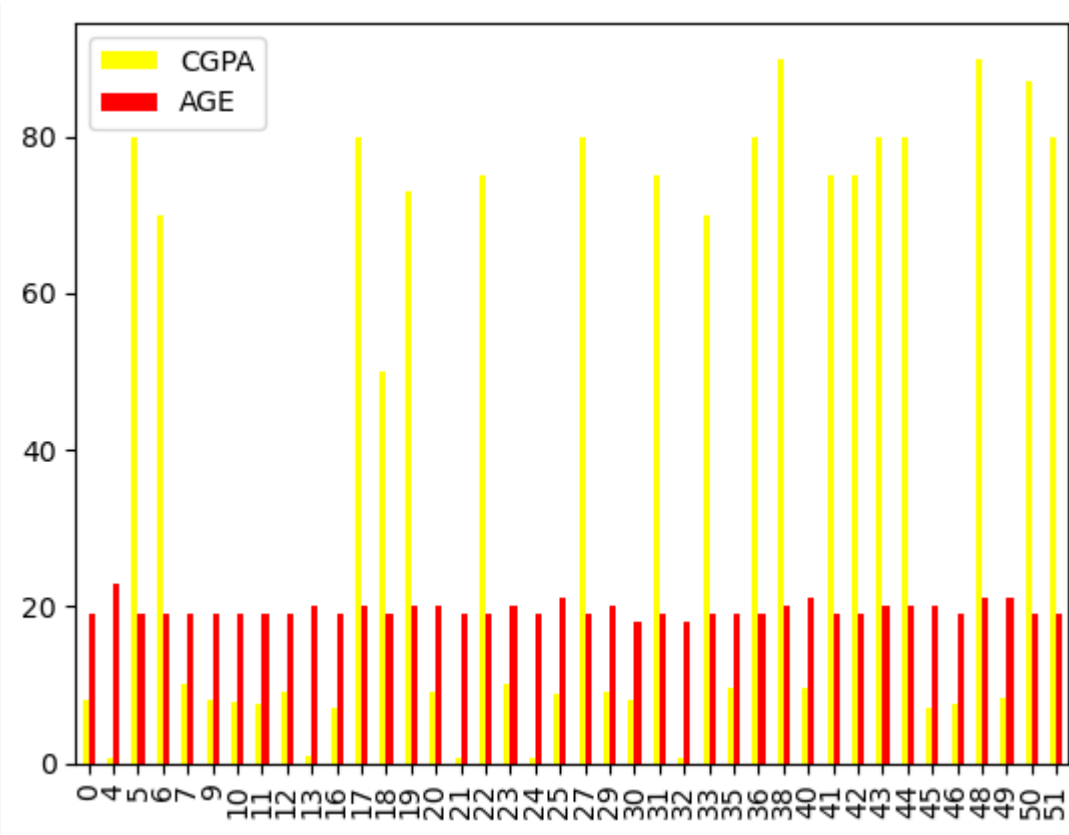
```
gr_ds.plot.bar(color=['yellow','red','blue'])
gr_ds
```

OUTPUT:

| G ma il | STUDENT NAME | ROLL NUMBE R | FATH ER NAM E | MOTH ER NAME | COURSE | C GP A | A G E | BRA NC H | SEMI STER | AAD HAA R NO | |
|---------------|-----------------------------------|--------------------------------|------------------------|---|---------------------------|--------------|---------------|----------------|------------------------------|--------------------|------------------|
| 0 | vennachandana 1@gmail.com | Venna Chandana | 21KP1 A44C 5 | Venna Ramanar eddy | Venna Lakshmi devi | DS | 8. 00 | 19 | Data scienc e | 2-2 | 636336 922883 |
| 4 | sivajibejjanki@ gmail.com | B.sivaji | 22kp5 a4402 | B.laksh maiah | B.veramma | DS | 0. 72 | 23 | Comp uter scienc e | 2-2 | 895444 662410 |
| 5 | ramyayalabolu1 23r@gmail.com | Y.Ramya | 21KP1 A44C 8 | Y.Anjai ah | Y Lakshmi Rajyam | DS | 80 .0 0 | 19 | CSD | 2-2 | 724574 588425 |
| 6 | charithareddy39 14@gmail.com | P.charitha reddy | 21KP1 A4475 | P.Madha va Reddy | P.Kavitha | DS | 70 .0 0 | 19 | CSD | 2.2 | 810177 524502 |
| 7 | gayathripolepall i70@gmail.com | POLEPA LLI. GAYATH RI | 21KP1 A4481 | POLEP ALLI. GURUB RAHM A CHARI | POLEPAL LI.SRIDE VI | DS | 10 .0 0 | 19 | Data Scienc e | 2-2 | 721819 168061 |
| 9 | sowjanya 1@gmail.com | T.SOWJA NYA | 21KP1 A44B 6 | T.SAM BA SIVA RAO | T.ARUNA KUMARI | DS | 8. 00 | 19 | DATA SCIE NCE | 2-2 | 338666 948901 |
| 10 | tammasahithi1 @gmail.com | Tamma Sahithi | 21KP1 A44B 0 | Tamma krishna reddy | Tamma Padmavathi | DS | 7. 70 | 19 | CSE (Data scienc e) | 2-2 | 685349 832128 |

| G ma il | STUDENT NAME | ROLL NUMBE R | FATH ER NAM E | MOTH ER NAME | COURSE | C GP A | A G E | BRA NC H | SEMI STER | AAD HAA R NO | |
|---------------|-----------------------------|---|------------------------|----------------------------|--------------------------|--------------|---------------|----------------|--|--------------------|------------------|
| 11 | podilisarayu6@gmail.com | PODILI LAKSHM ISARAY U | 21KP1 A4480 | PODILI RAMES H | PODILI ADILAKS HMI | DS | 7. 50 | 19 | DATA SCIE NCE | 2-2 | 458689 741091 |
| 12 | shaikkarishma811@gmail.com | shaik karishma | 21KP1 A4496 | SHAIK BAJI | SHAIK KHADRU N | DS | 9. 00 | 19 | ds | 2-2 | 663048 521599 |
| 13 | kumarvalaparla890@gmail.com | Venkata Aravind Kumar.V | 21KP1 A44C 0 | Veerasw amy.v | Lakshmi.v | DS | 0. 98 | 20 | Data Scienc e | 2-2 | 510305 345824 |
| 16 | vanukuri.raghava@gmail.com | Raghava | 21KP1 A44C 3 | Srinivas a reddy | Jyothi | DS | 7. 00 | 19 | Data scienc e | 2-2 | 424973 081348 |
| 17 | shaiksakina05@gmail.com | Shaik sameer | 21KP1 A44A 3 | Shaik Rahim babu | Shaik Raziya | DS | 80 .0 0 | 20 | DS | 2-2 | 529261 464345 |
| 18 | us465249@gmail.com | S sk usman | 21KP1 A4492 | S sk mastan vali | Mahabobba | DS | 50 .0 0 | 19 | DS | 2-2 | 568753 875709 |
| 19 | vallu.srinu756939@gmail.com | Vallu Srinu Siva Subrahma nyam | 21KP1 A44C 1 | Vallu Srinivas a Rao | Vallu Surya kumari | DS | 73 .0 0 | 20 | Comp uter Scienc e Engine ering& Data Scienc e | 4 | ***** ***** |

VISUALIZING THE BAR PLOT OF DIFFERENCE BETWEEN AGE AND CGPA:



BAR GRAPH:

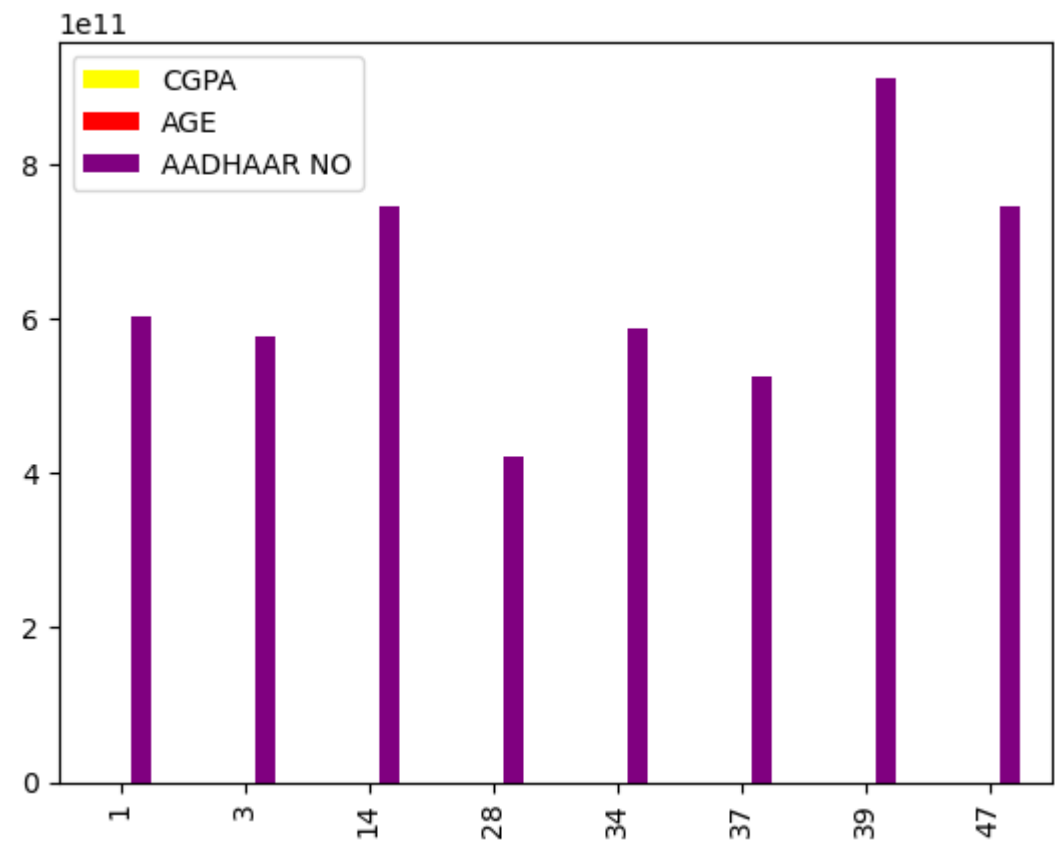
Here we are plotting a bar graph by using the same data.
By using these data we are plotting a graph for CSE students.

```
gr_cse.plot.bar(color=['yellow','red','purple'])
gr_cse
```

OUTPUT:

| G ma il | STUDENT NAME | ROL L NUM BER | FATH ER NAM E | MOTHE R NAME | COU RSE | CG PA | A G E | BRA NCH | SEMI STER | AAD HAA R NO | |
|---------------|------------------------------------|--|------------------------|----------------------------------|---------------------------------------|----------|---------------|------------|-----------------------------|--------------------|------------------|
| 1 | adilakshmi4765@gmail.com | N.Ven katesh | 21KP1 A4468 | N.Manik ya Rao | N.Sri Laksh mi | CS E | 83 .0 0 | 19 | CSE- DS | II-II | 602515 258256 |
| 3 | sandeepyeruva1124@gmail.com | Yeruv a sande p reddy | 21KP1 A44D1 | Yeruva Ajay Kumar reddy | Yeruv a Anjali Devi | CS E | 9. 50 | 20 | CSE | 2-3 | 576154 990146 |
| 14 | patchachinnu3@gmail.com | Patcha Jaswa nth | 21KP1 A4477 | Patcha apparao | Patcha sukanya | CS E | 0. 99 | 20 | Data scienc e | 2-2 | 744020 413963 |
| 28 | hemasanjushasanikommu828@gmail.com | hema sanjus ha | 21KP1 A4491 | musalare ddy | sivapar vathi | CS E | 73 .0 0 | 18 | cse | 2-2 | 422314 863763 |
| 34 | sudhamshavejendla@gmail.com | Vejen dla Devi Sri Sudha msha | 21KP1 A44C4 | Vejendla Srinivass Rao | Vejend la Laxmi Prasan na | CS E | 70 .0 0 | 19 | Cse- Data Scienc e | 2_2 | 587480 445790 |
| 37 | indhupotla123@gmail.com | indhu priya | 21KP1 A4483 | Lakshma narayana | Sujath a | CS E | 72 .0 0 | 19 | cse | 2-2 | 524345 891620 |
| 39 | jaffershaik718@gmail.com | Jaffer shaik | 21KP1 A4495 | shaik.Lai Laha | shaik. Ramja n bee | CS E | 70 .0 0 | 19 | cse | 2nd | 912229 276699 |
| 47 | saisairam068@gmail.com | Saira m | 21kp1a 44b4 | Venkata subbiah | Ravan amma | CS E | 10 .0 0 | 19 | Da | 2-2 | 746109 575146 |

VISUALIZING THE BAR GRAPH OF CGPA, AGE & AADHAR NO:



BAR GRAPH:

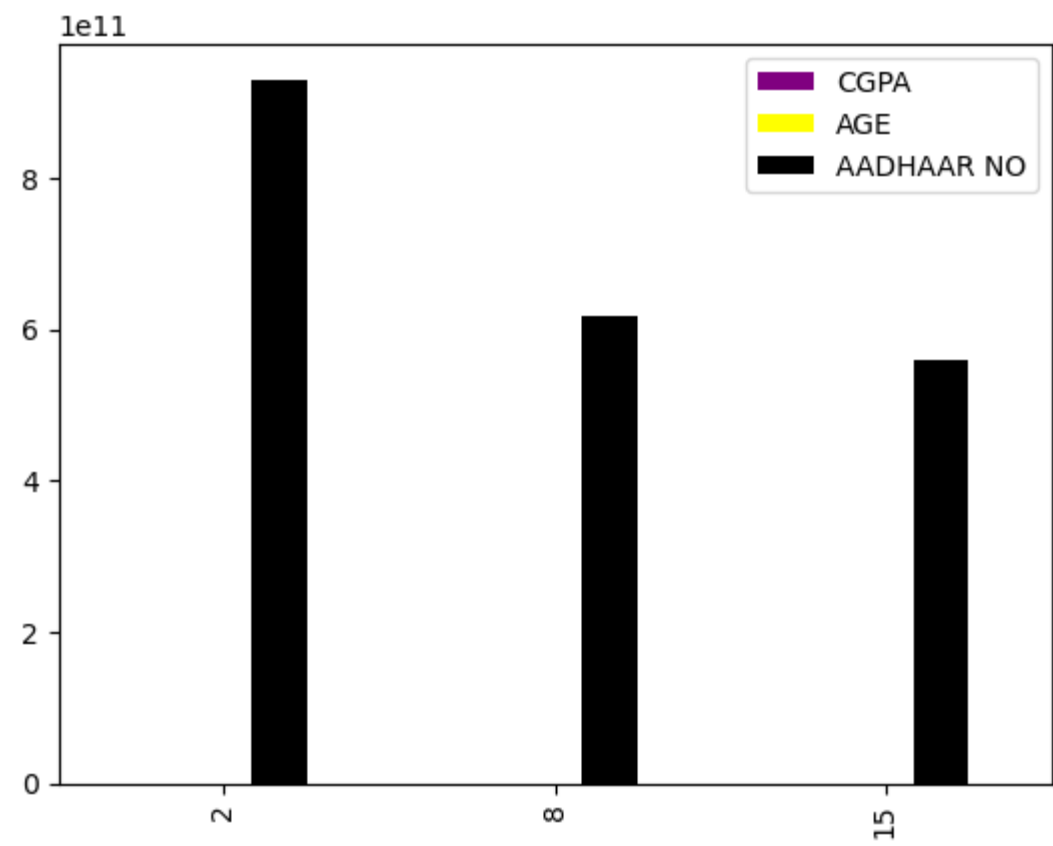
Here we are plotting a bar graph by using some colors like purple,yellow,black.
By using these colors we are plotting a bar graph by using the data.

```
gr_mech.plot.bar(color=['purple','yellow','black'])
gr_mech
```

OUTPUT:

| G ma il | STUDENT NAME | ROL L NUM BER | FATH ER NAME | MOT HER NAM E | COURSE | CG PA | A G E | BRA NCH | SEMI STER | AAD HAA R NO | |
|---------------|---------------------------|--------------------------------|--------------------|---------------------------|-------------------------|----------|-------------|------------|--------------|--------------------|------------------|
| 2 | sravankumar7156@gmail.com | Sravan Kumar | 21KP1 A4488 | Rama Chand ra Rao | Venkates waramma | ME CH | 7. 0 | 20 | mech | 4 | 930319 053088 |
| 8 | syedtasleem07@gmail.com | Syed Taslee m Afroze | 21KP1 A44A9 | Syed Rahim an | Syed Naseema | ME CH | 8. 0 | 19 | DS | 2-2 | 617020 354793 |
| 15 | manu952041@gmail.com | Pachip ulusu Mano har | 21KP1 A4472 | Pachip ulusu Prasad | Pachipulus u Bhavani | ME CH | 8. 5 | 19 | 19 | 2-2 | 559366 114423 |

VISUALIZING THE BAR GRAPH OF MECH:



```
y=age18.CGPA.value_counts()  
y
```

OUTPUT:

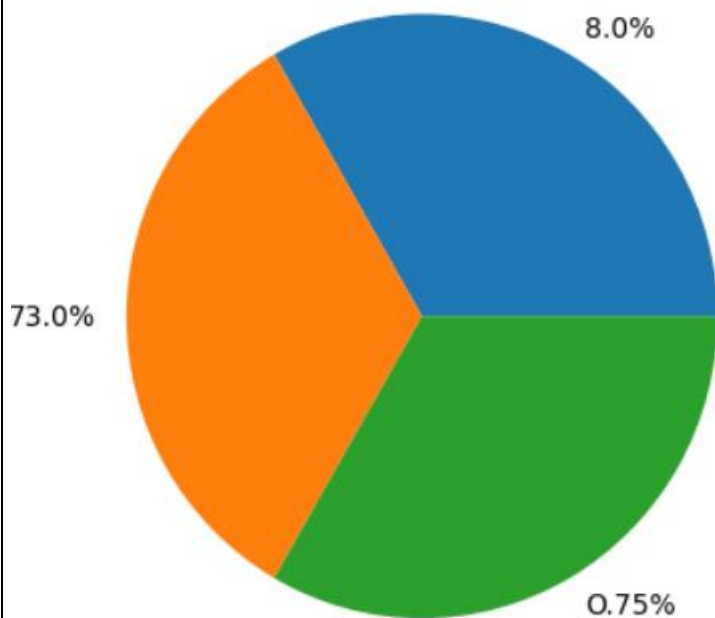
```
73.00    1  
8.00     1  
0.75     1  
Name: CGPA, dtype: int64
```

PIE PLOT:

To plot a pie graph we use the command `plt.pie`. Then it uses the command and build the pie plot for the given data.

```
plt.pie(y, labels=['8.0%', '73.0%', '0.75%'])  
plt.show()
```

OUTPUT:



```
age19p=age19.CGPA.value_counts()  
age19p
```

OUTPUT:

| | |
|-------|---|
| 80.00 | 4 |
| 70.00 | 4 |
| 75.00 | 4 |
| 8.00 | 3 |
| 10.00 | 2 |
| 7.50 | 2 |
| 0.70 | 1 |
| 72.00 | 1 |
| 9.60 | 1 |
| 0.75 | 1 |
| 8.50 | 1 |
| 50.00 | 1 |
| 7.00 | 1 |
| 83.00 | 1 |
| 9.00 | 1 |
| 7.70 | 1 |
| 87.00 | 1 |

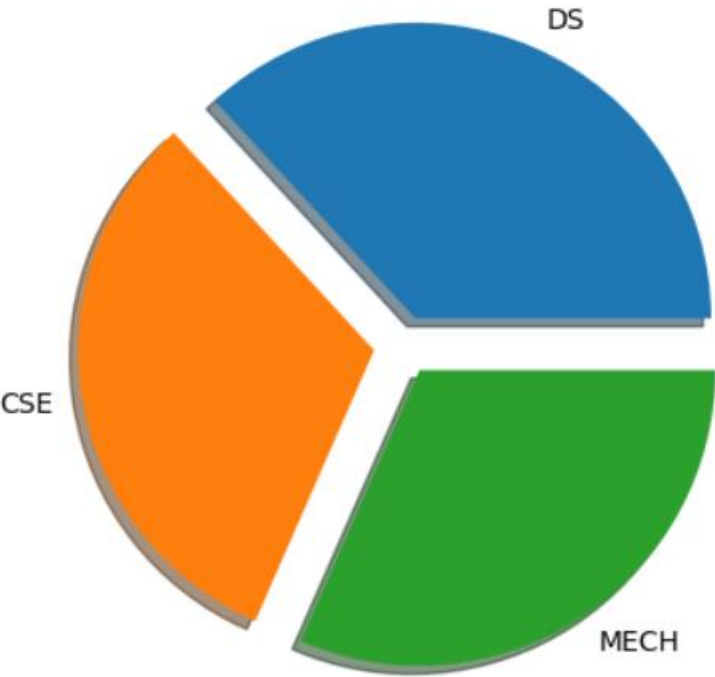
Name: CGPA, dtype: int64

PIE PLOT:

Here we are plotting the pie plot of 3 labels I.e; DS,CSE,MECH.
By using this I will plot the pie plot.

```
plt.pie(dsp[0:3],labels=['DS','CSE','MECH'],explode=[0.1,0.1,0.1],shadow  
=True)  
plt.show()
```

OUTPUT:



SCATTER GRAPH AND LINE GRAPH:

Here we plotted a graph for the given data in scatter that means dotted graph and line graph which is represented by a line.

To plot a scatter graph we use the command `plt.scatter` then it shows the below graph.

To plot a line graph we use the command `plt.plot` then it shows the below graph.

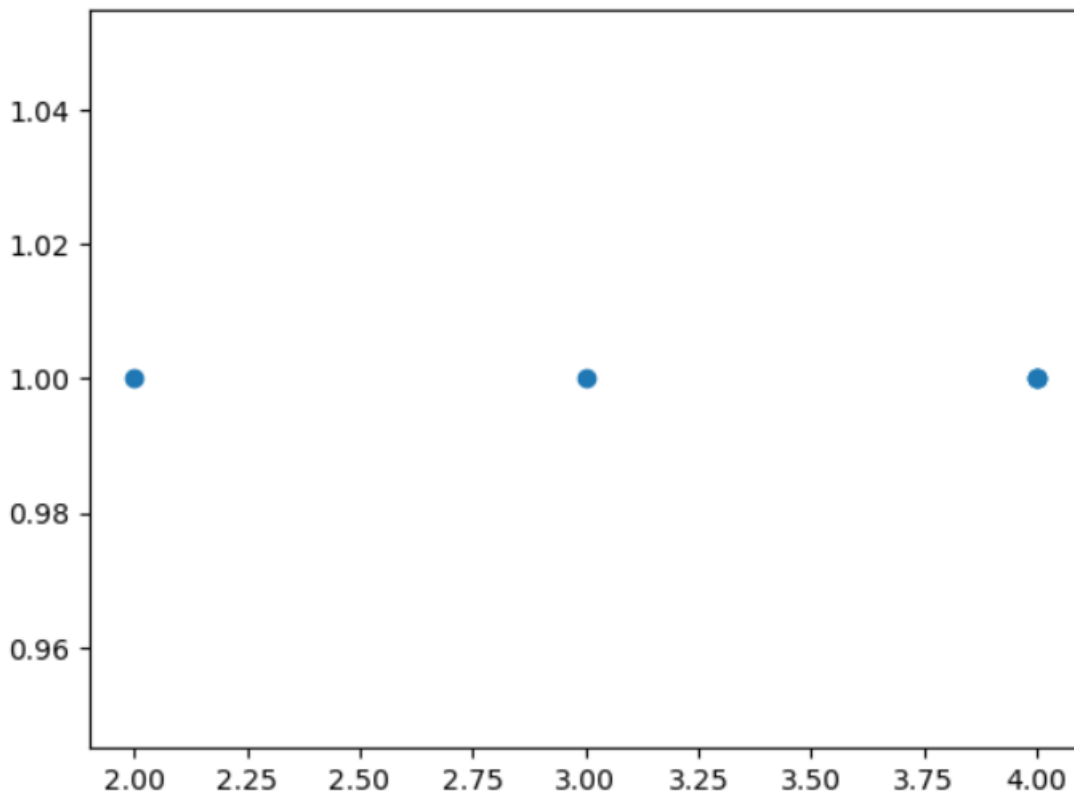
LINE GRAPH:

```
plt.plot(dsp.head())  
plt.show()
```

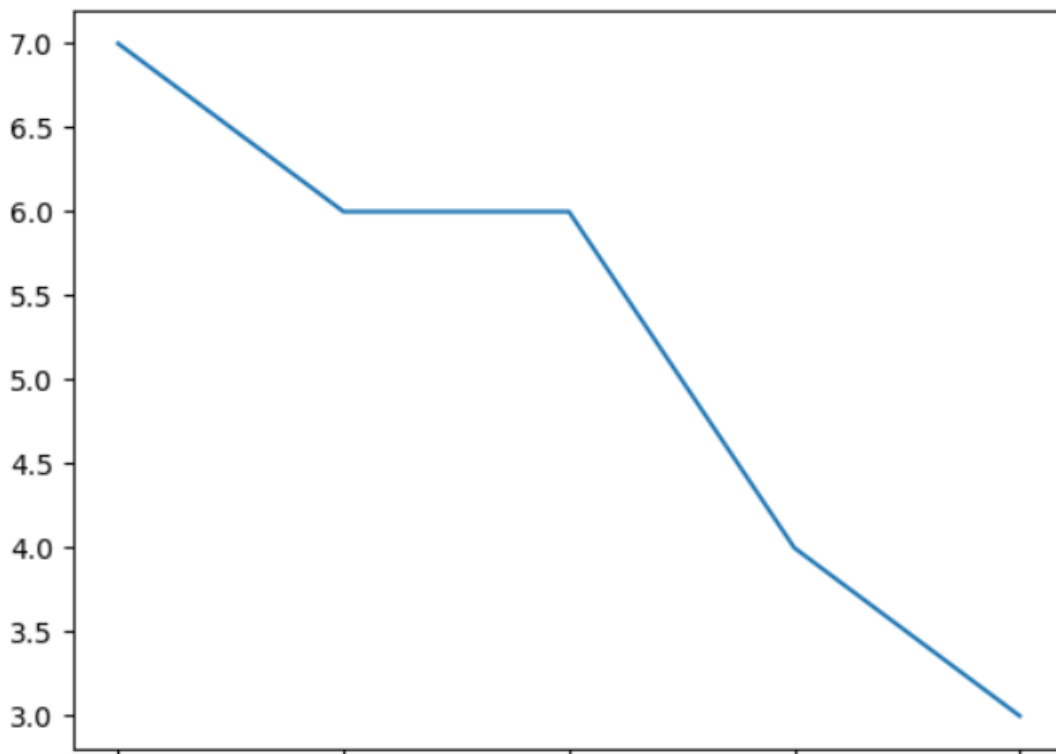
SCATTER GRAPH:

```
plt.scatter(age19p.head(),agep.tail())  
plt.show()
```

VISUALIZING THE SCATTER PLOT:



VISUALIZING THE LINE GRAPH:



RESULT:

- Data analysis summarizes collected data.
- It involves the interpretation of data gathered through the use of analytical and logical reasoning to determine patterns, relation ships or trends.

OUTPUT:

Data output is the process and method by which data can be studied under different circumstances and manipulated as required by the researcher. Any statistical analysis produces an output data that needs to be studied.

SUMMARY

In this project, we aimed to develop a STUDENT DATABASE ANALYSIS USING PYTHON, with a focus on data techniques which are implemented in Python.

Data Analytics is used in a large data sets to extract the informative data, and analysing the data with plots, graphs and other techniques.

PANDAS: Pandas provides functions to handle missing data, perform mathematical operations, and manipulate the data.

MATPLOTLIB: Matplotlib library is commonly used for plotting data points and creating interactive visualizations of the data.

NUMPY: Numpy can be used to perform a wide variety of mathematical operations on arrays.

Benefits:

- Improved data techniques, which can lead to understand the data easily.
- Improved graphs to visualize the data.
- Data analytics techniques enable a business to take raw data and uncover patterns to extract valuable insights.
- Easy memory management.